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# TABLE OF CONTENTS

1. Executive Summary .....	3
2. Vision, Mission and Goals .....	11
GOAL 1: INCREASE MARKET ADOPTION .....	13
GOAL 2: HELP NORTHWEST UTILITIES AND OTHER ENERGY EFFICIENCY ORGANIZATIONS ACHIEVE THEIR ENERGY EFFICIENCY GOALS .....	13
GOAL 3: BUILD REGIONAL MARKET KNOWLEDGE AND CAPABILITY THROUGH EDUCATION AND TRAINING .....	14
GOAL 4: INCREASE REGIONAL MARKET AVAILABILITY OF EMERGING TECHNOLOGIES .....	14
GOAL 5: SUPPORT THE REGION'S EFFORTS TO PROMOTE ENERGY EFFICIENCY ...	15
GOAL 6: FACILITATE REGIONAL ENERGY EFFICIENCY PLANNING AND IMPLEMENTATION .....	16
3. Regional Market Transformation and NEEA's Role .....	17
4. Strategic Business Units.....	18
4.1 MARKET OPERATIONS .....	18
4.2 EMERGING TECHNOLOGIES, ESTIMATED 5-YEAR BUDGET: .....	43
4.3 PARTNER SERVICES, CORPORATE COMMUNICATIONS, AND REGIONAL MARKET RESEARCH/EVALUATION .....	50
4.4 BUSINESS PLANNING AND OPERATIONS.....	59
5. Challenges and Paths to Success .....	64
6. Appendixes .....	69
6.1 NEEA's Value .....	69
6.2 ENERGY SAVINGS ESTIMATES AND COST EFFECTIVENESS .....	72
6.3 COST-EFFECTIVENESS ESTIMATES .....	73
6.4 BUDGET DETAIL.....	76
6.5 GOALS, OBJECTIVES AND METRICS DETAIL.....	80
6.6 2010-2014 BUSINESS PLAN AND THE 6 <sup>TH</sup> POWER PLAN.....	87

# 1. Executive Summary

## OVERVIEW

The Northwest Energy Efficiency Alliance (NEEA) 2010–2014 Business Plan is focused on creating lasting change in energy efficiency in the Northwest through strong partnerships with the region’s utilities and market actors. The region can achieve greater energy efficiency across Washington, Oregon, Montana and Idaho by working in concert than it can solely through individual efforts. This plan will deliver long-term change in the residential, commercial, industrial and agricultural markets by:

Partnership for long-term market change

- Filling pipeline with emerging technologies
- Working upstream in the market to leverage the region’s influence
- Leveraging economies of scale
- “Locking in” savings through codes and standards
- Expanding regional market capability
- Avoiding resource duplication
- Mitigating risk

The Northwest is at a crossroads in energy policy. Increasing energy demand, supply constraints, and climate change legislation all point to the increasing need for significant, cost-effective, environmentally responsible resources. The last decade has proven that energy efficiency is the “least cost” and most quickly available supply resource for securing a vibrant, sustainable future for the Northwest, and will continue to perform for years to come. The current economic crisis and environmental factors accentuate the imperative of providing energy resources with minimal capital outlays by the utility, the consumer, business and industry. Energy efficiency is vital in the drive toward economic and environmental health. But to meet the challenges posed by projected load growth and climate change, the region needs to multiply its current energy efficiency efforts several times over.

This Business Plan is being crafted during a time of severe economic and financial pressures for much of the region’s economy. Business and industry are challenged to maintain revenues, access credit and stay profitable. Capital is constrained. One might ask, at a time like this, whether a focus on energy efficiency should be maintained and actually heightened. NEEA and its Board of Directors have reflected on this, and the answer is a strong ‘yes.’ Improved cash flow and reduced expenses for consumer households and business is critical. Reduced costs of production for industry are essential. Energy efficiency yields both of those results. Efficiency remains our quickest and least cost resource. Loss of focus and momentum now would be precisely the wrong response and would not just slow future

efficiency gains, but impede them. As the region has learned from the bounty of CFL savings that continue to bear fruit from significant investments that occurred a decade ago, a continued, deeper investment in emerging technologies for tomorrow is critical. The justification for a focus on market transformation in the region during times like these is greater than ever. When money and resources are tight, leverage needs to be maximized and duplication minimized. This is the appropriate time for a cooperative regional effort to bring long-term value to the Northwest.

This Business Plan outlines the most efficient ways for NEEA to use its unique role as a regional entity to maximize energy efficiency for the region. At the same time, NEEA is not in this alone. Its market transformation work can only be successful when coordinated with all other energy efficiency efforts planned in the region. Together, the Northwest can meet the challenges of the next five years while building the foundation to achieve energy efficiency gains well into the future.

## **BACKGROUND**

This Business Plan follows a comprehensive strategic planning outreach process with regional stakeholders. More than 50 organizations, seven regional workshops and 114 completed online surveys from key stakeholders provided NEEA input, resulting in NEEA's 2010–2014 [draft Strategic Plan](#). The NEEA Board found the draft Strategic Plan sufficient to inform the development of this Business Plan.

The draft NEEA Strategic Plan outlined six interdependent energy efficiency goals:

1. Increase Market Adoption;
2. Help Northwest Utilities and Other Energy Efficiency Organizations Achieve their Energy Efficiency Goals;
3. Build Regional Market Knowledge and Capability through Education and Training;
4. Increase Regional Market Availability of Emerging Technologies;
5. Support the Region's Efforts to Promote Energy Efficiency; and
6. Facilitate Regional Energy Efficiency Planning and Implementation.

This Business Plan is aligned with these six goals and focuses on regional fairness and equity. Additionally, the Business Plan focuses on areas that build on NEEA's core values<sup>1</sup>, distinct characteristics, core competencies, and on activities that will complement local energy efficiency efforts. Because NEEA works broadly across the region, upstream with market actors and with those market actors that span multiple utility service territories, it honors the local relationships its partners have with their customers. NEEA strives to complement, not supplant, those relationships, and acknowledges that careful coordination and good communication is essential.

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<sup>1</sup> Detail on NEEA's core competencies and distinct characteristics can be found in the Appendix.

The Bonneville Power Administration (BPA) is currently in the process of establishing its role in energy efficiency following the implementation of its proposed Tiered Rates structure in 2012 and beyond. The outcome of this process is still uncertain. NEEA will work to adjust its regional efforts to complement the role that BPA and its customers ultimately decide is appropriate for them. NEEA will coordinate and collaborate with BPA and other regional efficiency organizations to minimize duplication and maximize economies of scale in regional energy efficiency efforts.

Concurrent to the development of this plan, NEEA has also been an active member of the Northwest Energy Efficiency Taskforce (NEET), which is facilitating an exchange of ideas and technical information to accelerate energy efficiency implementation and coordination throughout the Northwest. Many areas identified by NEET in its report of 12/31/2008 are in alignment with this Business Plan. Because of this, NEEA will incorporate requested NEET work where there is alignment and work with NEET to clarify the relationship between their recommendations and the work currently planned and budgeted for in this Business Plan.

In addition to the ongoing NEET and BPA processes, the Northwest Power and Conservation Council is currently developing the 6<sup>th</sup> Power Plan. Due for draft release in May 2009, the energy efficiency potential emerging from preliminary work on the 6<sup>th</sup> plan appears to be significantly larger than identified in the previous 5<sup>th</sup> Power Plan. To have the best chance of realizing this potential, it will be important for all of the regional efficiency efforts to be planned and coordinated. Many of the largest efficiency opportunities emerging from early work on the 6<sup>th</sup> Plan are targeted in this Business Plan. As the 6<sup>th</sup> Plan is finalized, NEEA will work with the region to develop appropriate strategies to achieve the goal of the 6<sup>th</sup> Plan and will re-evaluate the portfolio of projects as appropriate to support the regional effort.

Because of these changes as well as the rapidly changing markets around us, the NEEA Business Plan incorporates flexibility at the strategy, planning and operations levels to accommodate these changing realities. NEEA will prioritize systems and processes to allow the organization to remain nimble and responsive to changing markets, regional priorities and plans. Finally, NEEA plans to have an open dialogue with stakeholders to help ensure that it is continually aligned with the current trends and dynamics in the market to achieve the goals and objectives set forth in this plan, and to make adjustments to this plan as appropriate.

## **INVESTMENT AND ENERGY SAVINGS RETURN**

By 2014, the Business Plan is designed to deliver 200 aMW<sup>2</sup> of total regional energy savings of which 100 aMW<sup>3</sup> are net market effects energy savings<sup>4</sup>. The five-year investment required

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<sup>2</sup> This is in addition to the estimated 750 aMW of total regional savings expected to be delivered during the same period of time as a result of prior market transformation investments made in NEEA.

<sup>3</sup> This is in addition to the estimated 175 aMW of net market effects savings expected to be delivered during the same period of time as a result of prior market transformation investments made in NEEA.

<sup>4</sup> For more on the difference between total regional and net market effects savings see Appendix A-1.

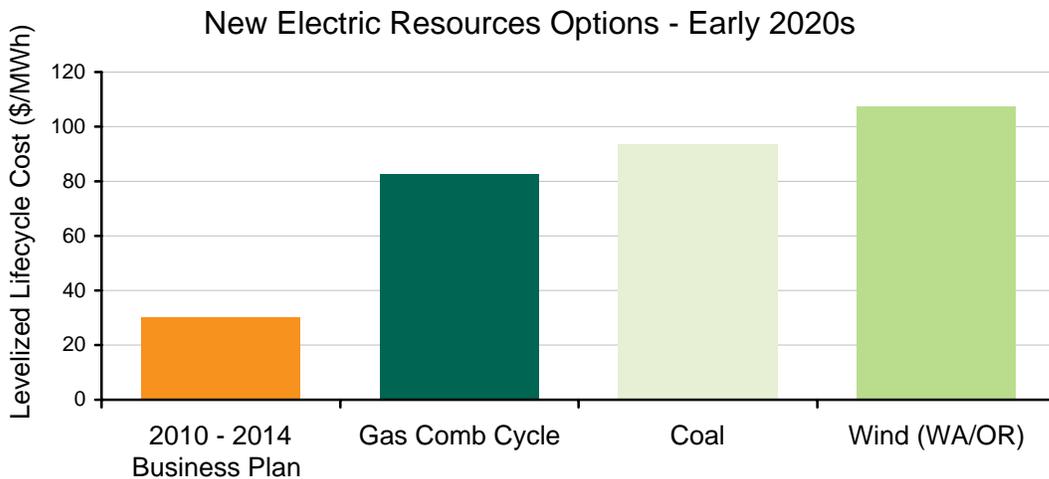
is \$196 million – about 11 percent<sup>5</sup> of the region’s projected total investment in energy efficiency activities. As a comparison, the region’s last five-year investment in NEEA represented approximately 10 percent<sup>6</sup> of the region’s total efficiency investment.

The cost and savings estimates illustrated below imply a range of a total resource cost (TRC) between 2.5–3.5 cents/kWH. Ten-year savings estimates are expected to generate at least 550 aMW total regional savings, of which 200 aMW are net market effects.

**5- and 10-Year Estimated aMW and TRC Projections**

	5 – Year Estimates	10- Year Estimates
Total Regional aMW Savings	200	550
Net Market Effect aMW Savings	100	200
Total Resource Cost	2.5 – 3.5 cents/KWh	2.5 – 3.5 cents/ KWh
NEEA Levelized Cost	2.0 – 2.5 cents/KWh	2.0 – 2.5 cents/ KWh

As noted below, the estimated cost of securing energy efficiency through this regional effort is projected to be less than half the cost of other resource options.



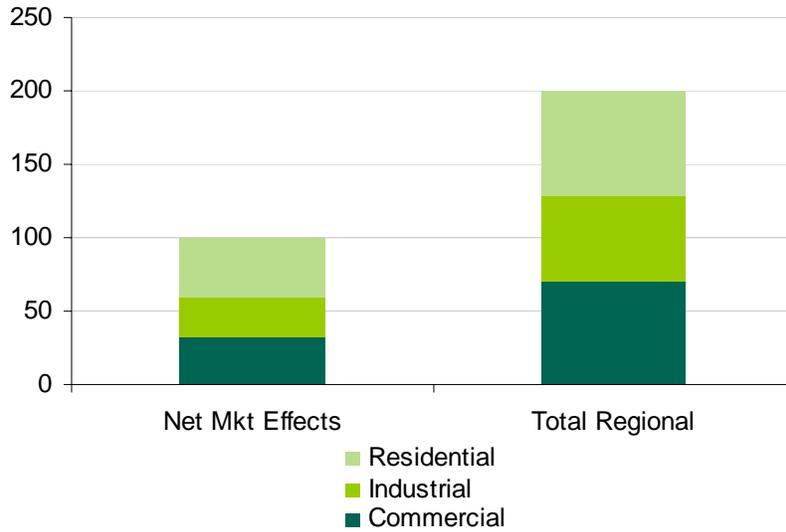
Source: Jeff King, Northwest Power and Conservation Council: Sixth Northwest Conservation & Electric Power Plan, Rankine (steam) Cycle Coal-fired Power Plant, Resource Assessment, Dec. 9, 2008

<sup>5</sup> Assuming a five-year budget of \$1.75 billion for the region (~\$350 million annually)

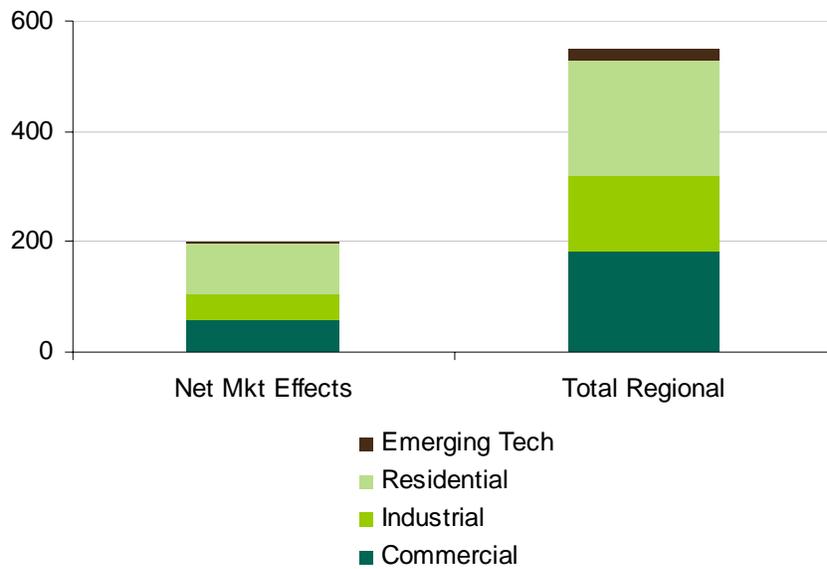
<sup>6</sup> Assuming a five-year budget of \$1 billion (~\$196 million annually).

The further breakdown of estimated savings, by area, is illustrated in the following two charts, broken down first by five-year estimated savings and second by 10-year estimated savings:

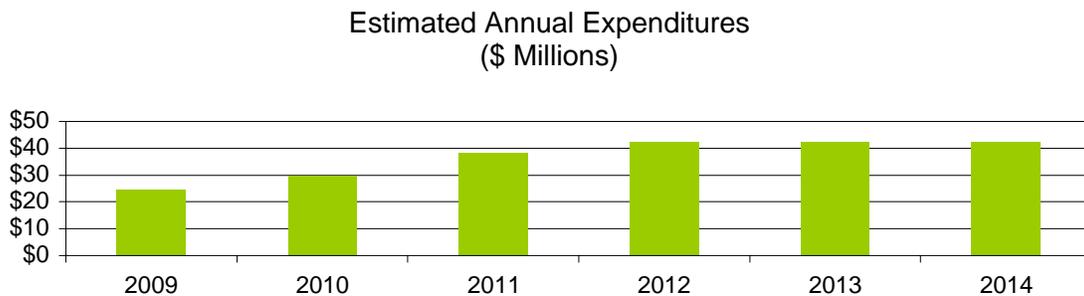
5 Year Estimated aMW Savings



10 Year Estimated aMW Savings



The required regional investment to execute this five-year Business Plan is \$196 million. The following illustration outlines estimated annual expenses with a graduated ramp over the five years. Expenses in 2010 are estimated to be \$30 million. For comparison purposes, the 2009 budget of \$24.5 million<sup>7</sup> is included. When compared to the 2009 budget, 2010 represents a 23% growth in expenses. The ramp rate is slightly higher in 2011 with a 25% increase, then it declines in the third year to 11%. The budget remains flat in years 2013 and 2014.



Below is a further breakdown of cost and savings by major area:

	5 Year Regional Savings	5 Year Net Savings	10 Year Regional savings	10 Year Net Savings	5 Year Budget (millions)
Residential	72	41	206	92	<b>\$43</b>
Commercial	70	32	182	56	<b>\$43</b>
Industrial	58	27	140	50	<b>\$34</b>
Emerging Technologies	N/A	N/A	23	2	<b>\$20</b>
Codes and Standards	N/A	N/A	N/A	N/A	<b>\$7</b>
Partner Services and Communications	N/A	N/A	N/A	N/A	<b>\$13</b>
Regional Evaluation and Market Research	N/A	N/A	N/A	N/A	<b>\$10</b>
Planning and Operations	N/A	N/A	N/A	N/A	<b>\$26</b>
<b>Totals</b>	<b>200</b>	<b>100</b>	<b>550</b>	<b>200</b>	<b>\$196</b>

<sup>7</sup> The budget includes both core funding and three regional “opt in” projects.

## ADDING VALUE BEYOND AMWS

NEEA's 2010-2014 Business Plan delivers significant energy savings; however, NEEA's value in the region goes well beyond the megawatt. Additional benefits include lasting changes in behavior and practices, and accelerated adoption of energy efficiency technologies, buildings, and business practices. Specifically, additional value beyond aMWs delivered through the execution of this plan includes:

1. Filling pipeline of emerging technologies
2. Delivering regional leverage with upstream market actors
3. Realizing economies of scale
4. "Locking in" savings through codes and standards
5. Expansion of regional market capability
6. Avoiding resource duplication
7. Mitigating risk

## CHALLENGES AND PATHS TO SUCCESS

The current economic situation and the volatility in the energy industry represent significant challenges to NEEA and the region in achieving the energy efficiency goals set for the next five years. In addition, specific challenges have been identified for NEEA and acknowledged including managing organizational growth and increased complexity

NEEA plans to build on a solid infrastructure and management process, and implement a robust system for prioritizing new opportunities. To ensure effectiveness, NEEA will institutionalize key business processes to ensure operations are transparent, flexible and efficient, decision-making is evidence-based, the voice of the region is integrated, and that NEEA invests in a market transformation portfolio that delivers optimal and equitable return on the region's investment. NEEA will implement a formal **portfolio management system**. This system will be actively managed to help ensure ongoing efficiency and accountability, openly providing information on NEEA initiative and program selection, and provide insight into the portfolio management criteria used in decision making.

To ensure engagement and participation, NEEA will utilize multiple existing and new expert/advisory committees to help ensure the diverse needs of the region are appropriately reflected within NEEA operations. Key committees will also help identify areas of coordination and reduce any risk of duplication of work in the region. NEEA will continue to place emphasis on evaluation of its results, and will place particular emphasis on developing a robust methodology for estimating savings associated with business practice change in the commercial and industrial sectors.

## SUMMARY

NEEA has a successful track record and is poised to build on that to provide significantly more regional support for energy efficiency. Over the past decade, NEEA and the region's electric utilities have already shown that the unique collaboration is extremely effective when

carefully coordinated. Together, under the banner of NEEA, the region has already accomplished a broad range of market-based and energy codes successes including the following:

1. Since 1997, more than 255 aMWs of net market effects have been saved in markets where NEEA and utilities have worked together through 2008.
  2. One in four light bulbs sold in the region are CFLs, and Northwest homes have twice as many CFLs as the national average.
- Regional healthcare systems representing more than 30% of the region's hospital beds are implementing Strategic Energy Management Plans (SEMP) to reduce their energy costs.
  - 20% of the region's food processing industry has made corporate commitments to practice Continuous Energy Improvement (CEI) to increase the energy efficiency of their total operations.
  - NEEA and Northwest states have sponsored improvements to regional energy codes that have resulted in nearly 20 aMW of energy savings for the region and that grow by 5 aMW each year.

This Business Plan provides a balanced portfolio of transformative initiatives, leverages synergies from existing efforts, accelerates new technologies and practices into the market, and provides educational/best practice support to regional partners while building increased awareness of energy efficiency in key areas. In summary, it yields substantial low-cost energy savings to the region while providing support to its partners to help them more effectively serve their customers.

**Value of Prior Investments: Lasting power of market transformation through partnership and regional collaboration.**

By design, investments in NEEA's market transformation efforts have and will continue to pay dividends to NEEA's funders –and the region as a whole – far beyond the years those initial investments were made. By 2014 it is projected that investments in NEEA through 2009 alone will have accrued a total of **1470 aMW** total regional savings, of which 500 aMW are net market effects.

## 2. Vision, Mission and Goals

### VISION AND MISSION

NEEA's vision and mission statements, as described in NEEA's draft Strategic Plan, together provide the foundation for its overall Business Plan. NEEA's vision provides a vivid idealized description of NEEA's desired long-term outcome. NEEA's mission defines its core purpose and focus; it is NEEA's reason for existing.

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**Vision:**

Energy efficiency is a cornerstone  
of a vibrant sustainable Northwest.

**Mission**

Mobilize the Northwest to become increasingly  
energy efficient for a sustainable future.

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### STRATEGIC GOALS

NEEA's strategy is based on collaboration with regional utilities and market partners to achieve 200 "total regional" aMW (550 aMW by 2019) in Northwest markets. One hundred aMW of those energy savings in the five-year plan period will be net market effects at a levelized cost of approximately 2.5 to 3.5 cents/KWh.

To achieve this objective, NEEA will pursue six goals outlined in its draft Strategic Plan and discussed below. To help ensure success, all six goals must be pursued, and pursued in concert; they are interdependent to one another as illustrated below. Stakeholders<sup>8</sup> and partners alike have indicated that NEEA must:

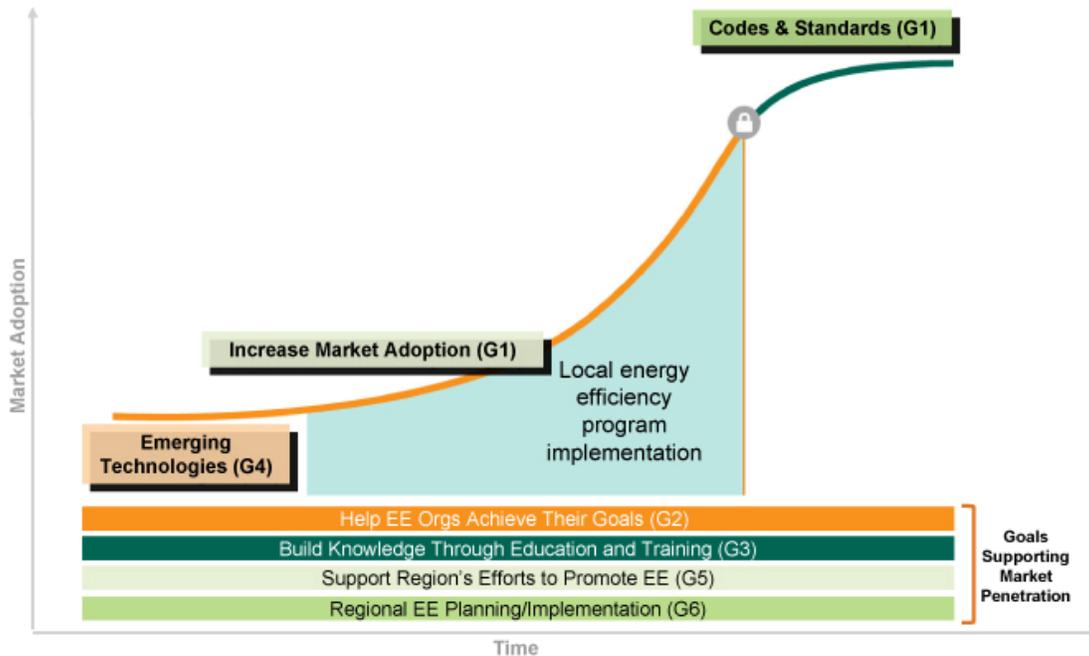
- G1. Increase Market Adoption
- G2. Help Northwest Utilities and Other Energy Efficiency Organizations Achieve their Energy Efficiency Goals
- G3. Build Regional Market Knowledge and Capability through Education and Training
- G4. Increase Regional Market Availability of Emerging Technologies
- G5. Support the Region's Efforts to Promote Energy Efficiency
- G6. Facilitate Regional Energy Efficiency Planning and Implementation

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<sup>8</sup> Reference for Stakeholder input results

## INTERDEPENDENCY OF GOALS

The detailed objectives presented in the Business Plan appendix (5.4) will not be reached without the support of all six goals as a comprehensive market strategy. The goals are interdependent as illustrated below; all are part of the market transformation continuum.



For instance, an adequate pipeline of emerging, viable, and cost-effective energy-efficient technologies (G4) is essential to increasing market adoption (G1). NEEA plays the role of working regionally with upstream market actors to help build early market adoption. Then, local voluntary energy efficiency programs take over to create more widespread market adoption among their customers (G2). NEEA will work with its stakeholders to develop and implement a transition strategy where appropriate between these roles. After the region has successfully achieved this high degree of market adoption, NEEA re-enters the picture to “lock in” these energy savings through accelerated adoption of energy codes and product standards where appropriate.

But none of this can happen without NEEA’s foundational goals (G2, G3, G5, G6). The foundational goals must always be in place. For instance, NEEA must continue to maintain some level of investment in market infrastructure, and market leverage to local programs (G2) where NEEA is able to deliver significant economies of scale. NEEA must also facilitate regional planning and implementation (G6) with its stakeholders and partners at the foundation level to maximize returns and integrate plans into the larger strategy.

Lastly, supporting the region’s efforts in promoting energy efficiency (G5) is an ongoing priority in meeting regional energy needs, and has the potential to augment and accelerate the scale of all energy efficiency efforts.

## GOAL 1: INCREASE MARKET ADOPTION

NEEA's primary goal has been, and will continue to be, to increase and accelerate the adoption of energy-efficient technologies, business practices, and behaviors among Northwest business, industry and consumers. NEEA's core work has been and will continue to be market transformation.

NEEA will continue to pursue this goal by intervening in key markets to create lasting change. This is done by removing identified barriers and exploiting opportunities that accelerate the adoption of all cost-effective energy efficiency as a matter of standard practice. NEEA's market interventions include working with a broad array of upstream market actors including manufacturers, distributors, retailers, builders, architects, code officials, trade and industry associations, and government organizations. Achievement of this goal is measurable by assessing the outcomes of specific market interventions.

### Value to Region:

- Leverage with upstream market actors
- Economies of scale
- Codes and standards lock-in savings
- Example: All in region will benefit from regional consumer products infrastructure

## GOAL 2: HELP NORTHWEST UTILITIES AND OTHER ENERGY EFFICIENCY ORGANIZATIONS ACHIEVE THEIR ENERGY EFFICIENCY GOALS

As one of many energy efficiency organizations operating programs in the region, NEEA is committed to supporting individual energy efficiency efforts of utilities and administrators by providing regional leverage and effectively complementing their programs and initiatives. In the past, NEEA has provided such support through its influence upstream in the market, through regional and national standard-setting organizations and state building codes; through facilitation of training, education, and technical support; and by funding regional information services.

During the extensive planning outreach efforts, stakeholders made it clear that NEEA should step up its efforts to provide services for utility program staff. NEEA will ramp up services it provides the region's energy efficiency organizations to help them achieve their individual goals. The goal of Partner Services is to support utilities and other energy efficiency organizations in achieving their goals. ***NEEA will determine the specific services to be provided based on the needs and priorities of funders.*** Partner Services work falls into three primary areas—information services; events and training; and regional program coordination of market activities in instances when funders believe that NEEA can deliver regional leverage and/or economies of scale. Achievement of this goal will be measured based on utility/energy efficiency organization usage and perceived service/effectiveness.

### Value to Region:

- Economies of scale; avoid resource duplication
- Equitable services to utilities east of the Cascades
- Examples:
  - Web portal will provide access to best practices and emerging technologies information
  - Circuit rider will ensure 2-way communication throughout the region.

## GOAL 3: BUILD REGIONAL MARKET KNOWLEDGE AND CAPABILITY THROUGH EDUCATION AND TRAINING

NEEA's stakeholders believe that a general lack of energy efficiency know-how among business, industry and consumers is a major barrier to the region's achieving its energy efficiency potential. NEEA has a history of successfully building market knowledge and market capability by coordinating regional training, education and technical support. Recently, the demand for these resources has far outstripped the supply. Going forward, NEEA will continue its work with market partners, building trades, and other professionals to further expand market capability for delivery of energy efficiency. Achievement of this goal will be measured by assessing changes in behavior/practice resulting from NEEA-sponsored activities.

### Value to Region:

- Expanded regional market capability
- Example: Training of building operations industry will lead to more energy-efficient buildings throughout region

## GOAL 4: INCREASE REGIONAL MARKET AVAILABILITY OF EMERGING TECHNOLOGIES

In the long run, the region's collective energy efficiency goals depend on a continuous pipeline of new, commercially available energy efficiency technologies and practices. Many of the current success stories in energy efficiency — compact fluorescent lamps (CFLs), resource-efficient clothes washers, super-efficient windows, and premium efficiency motors — were the result of development work in the 1980s and early 1990s. However, with deregulation in the mid-1990s, most work on emerging technologies stopped. As a result, today few new opportunities are ready to replace their impact. While there are some emerging technologies on NEEA's radar, "the next CFL" is not clearly visible on the horizon. The region—public power, investor-owned utilities and other energy efficiency organizations—have asked NEEA clearly to take a strong role in assuring the region that a pipeline of new efficiency opportunities will be maintained.

### Value to Region:

- Emerging technology pipeline
- Mitigation of risk
- Example: Heat pump water heaters have potential for long-term savings and will be explored

NEEA has experience and a track record in emerging technologies. This business unit will reinvest in this critical area. NEEA will manage a portfolio of emerging technology demonstration projects that have an estimated potential of 300 aMW of energy savings by 2030. While these activities will not yield much in the way of near-term savings, they will deliver a significant return in 10 to 15 years. NEEA provides a mechanism for the region to invest in these new opportunities in a way that minimizes risks to any one funder and maximizes potential benefits to all through economies of scale.

## GOAL 5: SUPPORT THE REGION'S EFFORTS TO PROMOTE ENERGY EFFICIENCY

Although utilities and other energy efficiency organizations widely recognize energy efficiency as the first priority for meeting energy supply constraints and environmental challenges, the general public and the marketplace at large does not.

Regional stakeholders are unanimous in their agreement that the current level of awareness and interest in climate change represents a tremendous opportunity to promote energy efficiency as an actionable solution. This topic has been a key area of focus for the Northwest Energy Efficiency Taskforce (NEET—Workgroup #4).

Utilities have been clear that they see marketing activities as their own domain; therefore, this plan **does not include any marketing or promotional efforts**. This plan does call for NEEA to support the region's efforts to promote energy efficiency as follows:

### Value to Region:

- Regional coordination
- Economies of scale
- Example: Findings from market research & evaluation identify effective marketing messages and approaches for behavior change

#### **Summarize Existing Marketing Research**—The NEET

Executive Committee has asked NEEA to work collaboratively with Work Group #4 during 2009 to hire a contractor who will summarize the learning to date from existing market research related to energy efficiency behavior. This contractor will also identify needs for additional research. NEEA will disseminate findings and recommendations to the region, and will continue to share learning via its new Partner Services business unit.

**Conduct Primary Marketing Research**—Based on identified needs for additional/ongoing market research, NEEA will conduct primary marketing research—only to the extent that it is most efficiently conducted at a regional level, and the regional “coordinating council” asks NEEA to conduct it. Examples of such research might include a study to identify motivating benefits/messages, and an awareness and behavior-tracking study.

**Disseminate Actionable Findings/Recommendations**—Actionable marketing research provides an analytical basis for identifying effective marketing strategies (e.g. targeting, media, messaging). NEEA can add value by disseminating such information to stakeholders and by making it easily accessible to the entire region. As a regional organization, NEEA is in a unique position to assist the Northwest in developing unified messaging and to support regional activities and other outreach strategies designed to elevate awareness about the benefits of energy efficiency.

**Communicate Regional Accomplishments**—NEEA will continue its ongoing efforts to keep energy efficiency top-of-mind via traditional corporate communications activities. In particular, NEEA will actively pursue opportunities to publicly communicate the region's collaborative energy efficiency accomplishments through NEEA, and the public benefits that those accomplishments have delivered.

NEEA is prepared to support the region's efforts as described above, and it has the core competencies and marketing experience to support this goal in any other manner that the region identifies as appropriate in the future.

## **GOAL 6: FACILITATE REGIONAL ENERGY EFFICIENCY PLANNING AND IMPLEMENTATION**

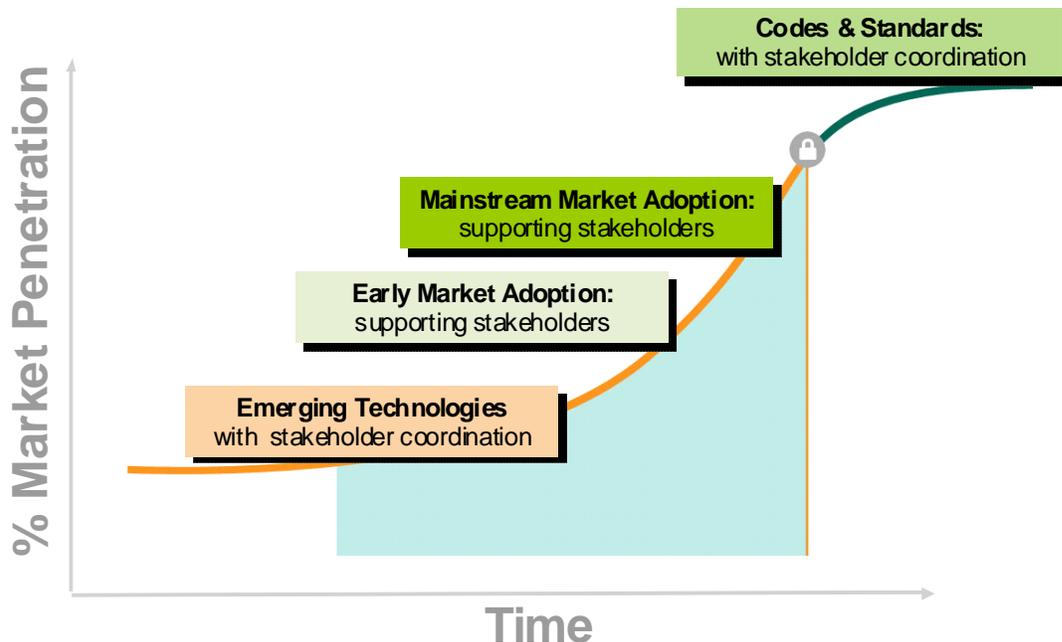
As a regional collaborative, NEEA is in an excellent position to advance coordinated regional market transformation strategies by facilitating the development of comprehensive market strategies, conducting regional market research on a schedule that coordinates with regional planning timelines, and providing additional information services. While the Northwest Power and Conservation Council provides a focal point for regional planning of energy efficiency resource potential, the majority of stakeholders believe that if there were greater coordination of roles and activities, the region could achieve a significantly higher level of energy efficiency.

The need for more deliberate regional interaction and coordination via a long-term regional program forum was discussed at length by NEET Work Group #3. That work group's recommendation suggested that NEEA play a role in facilitating the coordinated implementation of regional initiatives. The final results of this work group will help to further define NEEA's role in this area.

### 3. Regional Market Transformation and NEEA’s Role

Market transformation is the result of combined efforts from all energy efficiency organizations working together to sustainably change markets. Over time, the primary roles of these organizations change depending on their unique strengths, position in the market and capability to address where the market is at that point in time. Following is an illustration of the market transformation process over time and the roles various entities play.

As you can see in the graphic, there are places on the market diffusion curve, where NEEA’s unique role as a regional aggregator lends itself to taking on a primary role in the market transformation process. These three areas are very discrete and focus on leveraging upstream market actors. The bulk of the diffusion curve is in mainstream market adoption, and is where efforts to increase market adoption (G1) are best accomplished at a local level directly with end use customers.



## 4. Strategic Business Units

In order to meet the goals of this plan, NEEA has structured itself in such a way to be able to effectively grow its operations, while remaining flexible and nimble to respond to market changes and opportunities. NEEA is structured into four strategic business units: Market Operations; Emerging Technology; Evaluation and Partner Services; and Corporate Planning and Operations. In addition to this structure, NEEA will also implement a matrix management approach to its operations, in order to both share information more readily across units, while allowing for specialization that can increase depth of knowledge within a business unit. The following section describes key business units and approaches to deliver the value outline in this plan.

### 4.1 MARKET OPERATIONS

NEEA's key market transformation efforts will occur through core work in the Residential, Commercial, Industrial/Agricultural sectors and in Codes and Standards. NEEA has prioritized investment in markets across sectors based on current understanding of the maximum achievable potential for sustainable, cost-effective energy efficiency. As new information on efficiency potential becomes available (e.g. from the 6<sup>th</sup> Power Plan), NEEA will re-evaluate its portfolio of projects and make adjustments as appropriate.

Over the next five years, NEEA will increase its effort and investment in the Residential sector. This renewed focus on the residential sector is a direct response to input received in the strategic planning process for NEEA to re-establish and maintain its consumer products regional infrastructure and support significant new efficiency potential identified in the 6<sup>th</sup> Power Plan.

NEEA is prioritizing investment in the Commercial, Industrial and Agricultural sectors in the markets where the greatest potential for cost-effective market transformation exists. A number of initiatives in this Business Plan (e.g. Integrated Design, Strategic Energy Management) are aligned with efficiency potential that has been identified in the 6<sup>th</sup> Power Plan.

Concurrently, NEEA is undertaking enhanced efforts with state energy codes and national standards to raise the bar of efficiency at both levels. These efforts are strongly linked to NEEA's work in the sectors and will help ensure that energy code proposals are based on practical market applications and that federal standards are influenced based on documented market acceptance and demonstrated successful practice.

Ongoing evaluation/market research for all NEEA initiatives will be conducted in a timely and disciplined manner that facilitates decision-making and adaptive management. Over the next five years, NEEA is placing particular emphasis on developing a robust methodology for estimating savings associated with business practice change in the commercial and industrial/agricultural sectors. Rigorous evaluation of prior NEEA initiatives will be

conducted regularly to assess post market intervention baseline and market adoption and allow the region to substantiate the long-term savings associated with those initiatives.

NEEA will leverage the following strategic approaches to achieve its goals and objectives as outlined in this Business Plan through these market business units.

### ***Strategic Approach to Increasing Market Adoption***

NEEA pursues this goal by strategically intervening in markets with a comprehensive approach designed to create lasting change; it removes identified market barriers and exploits market opportunities to accelerate the adoption of all cost-effective energy efficiency as a matter of standard practice. NEEA's market interventions include working with a broad array of market actors including manufacturers, distributors, retailers, builders, architects, code officials, trade and industry associations, and government organizations. Following are key strategies NEEA will utilize in its core work of changing markets:

- Develop/maintain relationships with upstream regional and national market actors (e.g., manufacturers, retailers, designers, builders, service providers and other supply-side market actors) in order to influence increased availability of energy efficient products and services
- Develop/maintain relationships with national standards-setting organizations (e.g., U.S. Environmental Protection Agency, U.S. Department of Energy, ASHRAE) in order to promote more energy efficiency standards.
- Develop/maintain relationships with regional/national organizations that influence building energy codes.
- Work with associations and other leveraged opportunities in targeted vertical markets to demonstrate the value of strategic energy management and build sustainable demand for energy efficient business practices.
- Leverage "green" efforts of prominent national market actors (e.g., U.S. Green Building Council, American Institute of Architects, Building Owners and Managers Association); develop/maintain relationships and ensure that energy efficiency best practices are incorporated into their initiatives
- Develop and implement strategic interventions targeted at specific markets through comprehensive market strategies
- Seek partnerships and identify new opportunities the region could benefit from (i.e. partnership with California on the Consumer Electronics initiative)

### ***Strategic Approach to Education and Training***

NEEA's strategic approach to building market knowledge and capability through education, training and technical support will continue to be a foundational component in transforming markets.

Several key efforts comprise this approach. Energy efficiency will be a core part of professional development (e.g. training and education; continuing education; certifications) in partnership with others, including associations such as the Building Owners and Managers Association and Northwest Food Processors Association, utilities/public benefits administrators and trade allies. A suite of standardized training curricula for commercial and industrial trade allies and building/plant operators will be developed that deliver predictable participant behavior change that can be tied to measurable and replicable energy savings. Past successes in this area include the Building Operator Certification Program and the Compressed Air Challenge, both of which have a deemed savings estimate for delivery by local partners.

Other areas of focus include providing code education, training and technical assistance to all affected parties — building officials, designers, contractors and subcontractors. Materials will be provided to train and educate the residential new construction market: builders, verifiers, real estate agents; space heating market: distributors, contractors; and retailers.

### ***Strategic Approach to Promoting Energy Efficiency***

To promote energy efficiency in Northwest markets NEEA will help ensure, for instance, that key influential market organizations (e.g. U.S. Green Building Council, Building Owners and Managers Association, and Northwest Food Processors Association) fully integrate energy efficiency into their agendas.

### ***Strategic Approach to Market Transition/Exit Strategies***

NEEA takes a structured approach to defining and tracking progress toward market transformation: before any market transformation initiative is adopted, a cross-functional team develops an initiative logic model that clearly depicts the market situation (barriers to and opportunities for market adoption); NEEA's planned intervention, and intended market outcomes. The logic model includes specific market progress indicators are used to measure progress toward market transformation.

In the past, NEEA's Business Plan encouraged initiatives to focus only on the early stages of market adoption; progress indicators typically focused on improved product/technology availability and quality and increased end-user awareness of benefits and product/technology adoption. Once the major barriers to market adoption were removed, NEEA stopped funding the initiative. After NEEA terminated funding, utilities continued to make cost-effective investments in increasing market penetration—but without NEEA's assistance.

Stakeholders, however, have made it clear that NEEA should explicitly plan exit/transition strategies for the initiatives it funds. This Business Plan calls for NEEA and partners to explicitly identify what role, if any, NEEA should continue to play after initial market barriers have been overcome and market progress indicators met. Specific tactics will also be identified for how programs and initiatives will be "handed off" to utilities. These strategies will take into account variance in markets across the region so that successful transformation

of markets in some portions of the NW, such as the I-5 corridor, will not be generalized to the entire region unless data substantiates that.

For example, after NEEA completed the first phase of its 80 PLUS project (the indicators for which included increased product availability, lower price and a revised ENERGY STAR specification), it transitioned to a second phase of the project which is limited to NEEA providing regional coordination with retailers. It makes sense for NEEA to play this role because it is more cost-efficient and effective for a single party to negotiate with national market actors than for individual utilities to play that role. Similar strategies will be developed on an initiative by initiative basis.

### ***Strategic Approach to Regional Coordination***

In addition to explicit exit/transition strategies, this Business Plan includes funding and objectives to provide regional coordination where NEEA can deliver market influence with upstream market actors, economies of scale, or other leverage/efficiencies. Specific regional coordination program activities to be funded will be selected based on stakeholder needs and priorities. Examples might include coordination of: a program to improve roof-top HVAC operating performance; creation of prescriptive design packages that meet 2030 Challenge performance levels for smaller buildings; or regional trainings for industrial customers. In each of these examples, while no market transformation opportunity exists, per se, NEEA can add value by providing leverage with upstream market or by developing turnkey program materials. These are but a few examples intended for illustration purposes only.

### 4.1.1 Residential, Estimated 5-Year Budget: \$43.3 Million

	Estimated 5-Year aMW Savings	Estimated 10-Year aMW Savings
Net Market Effects	41	92
Total Regional	72	206

Consumers are primarily exposed to energy-efficient products through three channels: new construction, remodel/retrofit and retail. The crux of NEEA’s residential strategy is to support and maintain a regional upstream delivery platform for energy-efficient products and services that complement and support utility consumer programs through two of these channels: new construction and retail.

NEEA’s role is to leverage the market power of the Northwest to broadly engage the building industry, dealer networks, manufacturers, and retailers. This allows the region’s utilities to focus on local relationships and their individual customers. NEEA will accelerate distribution of highly energy-efficient products and practices as well as leverage a robust platform to introduce new technological advances in energy efficiency to the region. Because the Northwest already has a high market penetration of ENERGY STAR level products, NEEA plans to move the region beyond the ENERGY STAR platform for greater savings. An established new construction and retail infrastructure allows an outlet for aggressively procuring and distributing the most energy-efficient products and services throughout the region.

#### Additional Value Delivered Through The Plan

Build regional upstream infrastructure that can be used for any consumer product

Provide path for increasing building codes

Leverage the market power of the Northwest with the building industry, dealer networks, retailers and manufacturers

#### ***New Construction***

A new construction platform is important for the region because it 1) minimizes lost opportunities and 2) provides a path for increasing codes and locking in energy efficiency savings.

In spite of the recent housing decline, the market share for Northwest ENERGY STAR homes has steadily increased. Consumer awareness and demand is on the rise. Builders are finding they can differentiate their homes with ENERGY STAR in the current housing market and

economy. 1Now is the optimal time to continue to generate demand for energy-efficient homes.

As the new construction market has evolved over the last several years, NEEA's role must also evolve. Traditionally, NEEA has focused on the implementation of the ENERGY STAR Homes program (i.e. recruiting and training performance testers, verifiers, and builders and marketing the ENERGY STAR brand). NEEA is broadening its scope to take advantage of the multiple green building brands that have gained recognition in the market over the past couple of years. Many of these brands do not currently require significant energy efficiency as part of their "green" definition. Therefore, addition to supporting ENERGY STAR, NEEA will encourage "green" building programs to adopt minimum energy efficiency standards and, in turn, provide marketing and training support to help them achieve higher market penetration.

Establishing energy efficiency specifications in voluntary programs is an important part of achieving code adoption of higher levels of energy efficiency. This provides proof that standards are doable by a significant percentage of builders and allows NEEA to reduce market barriers of specific technologies or practices to ready them for mass adoption (i.e. duct testing). NEEA will continue to influence national voluntary standards for new construction so that Northwest research and assumptions impact national efforts such as the ENERGY STAR homes specifications and federal tax credits.

NEEA will continue to influence national voluntary standards for new construction, so that Northwest research and assumptions impact national efforts such as the ENERGY STAR homes specifications and federal tax credits.

As part of NEEA's new construction strategy, investments will be made to reduce market barriers to new technologies that support Goal 4 (Emerging Technologies). Emerging technology is an important future focus as it pushes construction toward net zero home building and allows continued adoption of higher specifications for both voluntary new construction programs and new codes. Investing in new construction technologies also has the added benefit of spilling over to the retrofit and remodel market, increasing saving potential (i.e. more efficient windows).

### ***Retail — Consumer Products***

A few years ago, NEEA developed a retail and upstream infrastructure for energy-efficient lighting and white goods. The infrastructure was comprised of a network of relationships with retailers and manufacturers. By leveraging the buying power of the Northwest, initiating upstream programs and partnering with Northwest utilities, NEEA was able to obtain CFLs and energy-efficient efficient clothes washers at retail at a standard above ENERGY STAR, surpassing the availability of these products in other parts of the country. Working together, NEEA was able to drive consumer demand for these products. As a result, the Northwest quickly achieved significant market share of energy-efficient clothes washers and CFLs before the rest of the country. Savings continue to be realized from those initiatives.

Retail channels continue to have strategic importance. NEEA is rebuilding the **consumer product platform** and will extend it to include any electric-powered product that affects

load (all “plug” loads). The retail channel is where consumers shop and the region must influence what products are available and promoted. This is essential to ensuring that real change occurs in the market adoption of energy-efficient products. NEEA’s strategy will address big box, regional, independents, and online retailers as well as manufacturers whose products affect energy efficiency (i.e. adjusting manufacturer defaults for brightness and standby settings on TVs) and upstream buy-down programs. **NEEA’s initial area of focus will be in the electronics sector.** Plug load growth is the fastest growing residential end use and a big concern of the Northwest region. In 2009 NEEA will focus on high-definition TVs. As budget allows, this focus will expand into lighting, white goods, and other areas of opportunity. NEEA will work with utilities to ensure our efforts are complimentary and not duplicative.

### ***New Opportunities***

**TopTen.** Consumer products are changing rapidly while current efficiency programs tend to get updated on slower cycle. This creates a lag between new products and responsiveness of programs such as ENERGY STAR. To address this issue, NEEA will invest in TopTen USA, modeled after an established website in Europe that highlights the ten most energy-efficient products in a wide array of popular home purchase categories. In Europe, the site has been successful in spurring the development of energy-efficient products among manufacturers, decreasing the cost of energy-efficient technologies, and accelerating the adoption of these products by consumers. TopTen has now entered the U.S. market. By getting involved early and partnering with other national supporters of this effort, NEEA will be able to influence the development of TopTen content and connect it directly to Northwest retail channel efforts. Claire Fulenwider serves on the TopTen Board of Directors, helping to help ensure the direction of the effort is strategic for the Northwest and its customers.

**Promising New Products.** There are a number of new products currently in the market that are good candidates for market adoption. For example a regional **ductless heat pump** pilot is being conducted in the Northwest from 2008-2010 to quantify energy savings, non-energy benefits and to evaluate consumer acceptance. We expect the pilot to realize significant savings in the space heating category — one of the biggest energy use areas of the home. In the 2010–2014 timeframe, adoption will be accelerated by working upstream with manufacturers to ensure the latest models of ductless heat pumps are regionally available. NEEA will build upstream relationships and provide training for partners working with distributors to help ensure products are appropriately priced and marketed. In addition, market barriers will be monitored and addressed. As market barriers are overcome, NEEA will coordinate with utility partners to transition this initiative to them for wide-spread promotion and program support.

### **Ductless Heat Pump Opportunity**

A strong opportunity to deliver a potential 200 aMW in the Northwest in existing single-family homes that could grow to 400 aMW with the addition of existing manufactured and multi-family homes.

### ***Regional Coordination***

The residential sector will coordinate with partner services and utilities to identify and support economy of scale opportunities for the region like regional residential forums or specific opportunities such as new applications for solid state lighting (e.g. holiday LED lights).

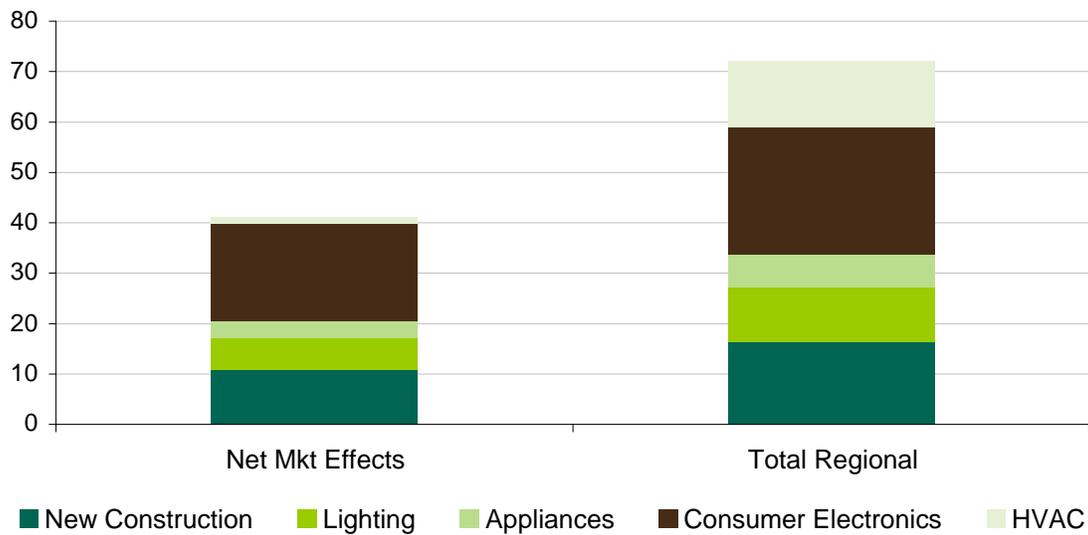
### ***Residential Contributions to Strategic Goals***

<b>Goal</b>	<b>Key Objectives</b>
<b>aMW Savings</b>	<ul style="list-style-type: none"><li>• By 2014 NEEA, regional utilities and market partners collaborate to change Northwest markets resulting in 72 aMWs of total regional savings (206 total regional aMWs by 2019)</li><li>• At least 41 and 92 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively.</li></ul>
<b>Increase Market Adoption</b>	<ul style="list-style-type: none"><li>• Achieve 15% market penetration of ductless heat pumps among identified target households</li><li>• Identify and pursue the highest priority consumer products that present greatest potential for market transformation and energy savings</li><li>• Increase the energy efficiency of new residential construction</li></ul>
<b>Help EE Organizations Achieve Goals</b>	<ul style="list-style-type: none"><li>• Deliver access to and influence with upstream mass market actors and channels.</li><li>• Communicate with energy efficiency partner organizations on a regular basis to understand their needs and priorities discuss NEEA partnership and identify areas for improvement/added value, and maintain a stakeholder focused organization.</li></ul>
<b>Build Market Capability</b>	<ul style="list-style-type: none"><li>• Train and educate the residential new construction market: builders, verifiers, real estate agents; space heating market: distributors, contractors; and retailers.</li></ul>

**Residential 2010–2014 Estimated Budget**

New Construction	\$	12,000,000
Retail - Consumer Products	\$	12,100,000
Promising New Products (e.g. Ductless Heat Pumps)	\$	9,500,000
Regional Coordination	\$	2,250,000
Evaluation & Market Research	\$	3,600,000
Performance Mgmt, Tracking & Reporting	\$	800,000
Staffing and Related Expenses	\$	3,000,000
<b>TOTAL</b>	<b>\$</b>	<b>43,250,000</b>

**Residential 5-Year Estimated aMW Savings**



## 4.1.2 Commercial, Estimated 5-Year Budget: \$43.0 Million

	Estimated 5-Year aMW Savings	Estimated 10-Year aMW Savings
Net Market Effects	32	56
Total Regional	70	182

The commercial sector is complex. It is a collection of markets, each with its own characteristics, motivations, challenges and opportunities. While these markets are distinct, they relate to one another, with best practices in one market also applying, with variations, to another market. Related trade ally products and services apply across multiple commercial markets. NEEA’s commercial sector building initiative, BetterBricks, addresses individual market distinctions, while capitalizing on similarities and market interrelationships.

### A cross-cutting approach to building demand for energy efficiency

	INSTITUTIONAL		REAL ESTATE		RETAIL	
<b>DESIGN &amp; CONSTRUCTION</b>	HOSPITALS & HEALTHCARE	OTHER INSTITUTIONAL	OFFICE	OTHER REAL ESTATE	GROCERY	OTHER RETAIL
<b>BUILDING OPERATIONS</b>	HOSPITALS & HEALTHCARE	OTHER INSTITUTIONAL	OFFICE	OTHER REAL ESTATE	GROCERY	OTHER RETAIL

CURRENT FOCUS  PAST FOCUS  FUTURE FOCUS

As illustrated above, the commercial initiative simultaneously and systematically drives market transformation in the commercial sector by building demand for and supply of energy efficient products and services in these markets. The approach is a continuation of the strategy and activities initiated in the previous business plan, addressing market barriers to accelerate commercial sector energy efficiency and capitalize on market opportunities in partnership with the region’s utilities and business associations. The strategy is rooted in education and professional development, with activities ranging from advisory assistance to seminars and workshops focused on advancing best practices.

### ***Demand from Owners***

Under the banner of BetterBricks, NEEA works with companies on a strategic approach to energy management that addresses all business practices that impact energy use. These practices span the organization, and include building design and construction, building operations, purchasing equipment and services, and capital upgrades. Best practices result in organization-wide and building-specific energy performance targets, consistent financial decision-making based on total cost of ownership, energy-efficient equipment purchasing guidelines, building operations staff training and enhanced building service contracts.

A strategic approach provides decision makers with the means to better manage energy within their organizations and reap the benefits of energy efficiency. With energy-related business practices in place across an organization, the demand for energy-efficient products and services increases. For example, construction managers know how to ask for and demand energy-efficient, high-performance new buildings. Facility managers know how to improve existing building operating performance and engage building service providers for support. The approach complements the work of utilities and helps them meet their own energy efficiency targets. As companies strive to meet their organization-wide energy reduction targets, their participation in utility technical and financial assistance programs increases.

<b>Additional Value Delivered Through The Plan</b>
Provides professional development opportunities (i.e. training) through leveraged partnerships with market-based organizations
Provides project-based design assistance enabling professionals to advance their practice and meet changing client expectations.
Conducts research in integrated design labs to continually raise the bar on energy performance of newly designed commercial buildings
Provides new tools and services to support more efficiency operations of buildings. (E.g. rooftop HVAC)

NEEA is currently working with a third of the healthcare market and three prominent real estate companies on strategic energy management (SEM), with initial company goals ranging from 10–30% reduction in energy use. For the 2010–2014 Business Plan, NEEA intends to build on these efforts, achieving the following objectives:

- 65% of hospitals practicing SEM (measured by # of beds)
- 50% of office real estate practicing SEM (measured by floor space)
- 15% of other commercial practicing aspects of SEM (measured by floor space)

The goal is to enable organizations to independently employ a strategic approach to energy management with continuous improvement in their practices. Broad based education, training and marketing efforts, including use of the BetterBricks website ([www.betterbricks.com](http://www.betterbricks.com)), will be used to influence commercial markets. NEEA will work with Northwest energy efficiency organizations (utilities, Energy Trust of Oregon, Bonneville Power Administration, and state and local programs) to include components of strategic energy management in their own programs to achieve higher levels of energy savings.

### ***Supply: New Construction***

On the supply side, NEEA focuses on trade allies involved in building design and construction; including architects, design engineers and construction contractors. These trade allies have limited exposure or experience with energy-efficient, high-performance building design and construction practices. Best practices are rapidly advancing due to the growing interest in sustainability, making it challenging for practitioners to remain current. NEEA provides professional development opportunities (training), access to tools and expertise, project-based design assistance and case studies that enable professionals to advance their practice and meet changing client expectations. Training is often offered through leveraged partnerships with market-based organizations that serve target audiences, such as the American Institute of Architects or the U.S. Green Building Council.

The Integrated Design Lab network is the hub of NEEA's efforts to advance energy- efficient, high-performance building practices within the region's design community. Located throughout the region, and associated with the region's universities, the labs are regional and national leaders in energy-efficient design practices. The labs are actively working with design firms representing more than 50% of the healthcare and office real estate new construction markets. The labs conduct research, deliver training and provide project-based advisory assistance to continually raise the bar on energy performance of newly designed commercial buildings. They are helping the design community meet the increasing energy efficiency goals of American Institute of Architects' 2030 Challenge and the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) standards.

NEEA's goal is to enable the design and construction industry to build energy-efficient, high-performance buildings that progressively achieve greater levels of efficiency and performance. For the 2010–2014 Business Plan, NEEA intends to achieve the following objectives:

- 50% of architectural and design engineering services within targeted markets achieve energy savings consistent with 2030 Challenge Targets (50% or + over current practice).
- 30% of design/build contractor services within targeted markets achieve energy savings consistent with 2030 Challenge Targets (50% or + over current practice).

While the objectives speak to the office real estate and healthcare markets, NEEA's design and construction efforts work across all commercial markets. In 2008 the labs assisted

architects in advancing their integrated design skills on 137 projects throughout the region, 40% within the targeted markets and 60% outside the targeted markets, including schools, retail stores, and university/college buildings. Work will continue across all commercial markets while emphasizing key target markets. The design/build contractor focus is new for NEEA, and represents a push to further influence the design and construction of smaller buildings in the region.

### ***Supply: Building Operations***

NEEA also works to build the skills and capabilities of those who operate and maintain existing commercial buildings; including building operators, mechanical contractors, building controls companies and equipment manufacturers; thus, increasing the supply of competent workforce in energy efficiency fields. Most building operators and building service providers lack the skills and experience needed to improve building operating performance. NEEA provides professional development opportunities (training), access to tools and expertise, and project-based assistance to build the capacity of both in-house staff and trade allies. As with new construction, training is often offered through leveraged partnerships with market-based organizations that serve target audiences, such as the Building Owners and Operators Association or the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

As building owners adopt a strategic approach to energy management, their expectations increase for how buildings perform. This gives building service providers that have invested in developing new skills and capabilities an excellent opportunity to offer clients building performance services. NEEA is currently working with half a dozen service providers across the region on their service offerings and capacity to deliver, including two of the largest mechanical contractors in the region. Building tune-up and enhanced operations and maintenance (O&M) services offered by these companies can often yield the building owner 10–20% low cost energy savings and serves as a good lead in to utility technical and financial assistance programs.

NEEA's goal is to enable building operators and service providers to significantly improve the operating performance of existing commercial buildings. This Business Plan should result in 50% of building operators and service providers within targeted markets achieving building operating performance that saves 30% or more energy than current practice.

Building operations work will continue across all commercial markets while emphasizing key target markets. NEEA is and will continue to promote better roof-top HVAC operating performance for smaller buildings. NEEA is working with Northwest energy efficiency organizations (utilities, Energy Trust of Oregon, Bonneville Power Administration, etc.) to include building operating performance for both large and small buildings in their own programs to achieve higher levels of energy savings

### ***Office Electronic Equipment***

Office equipment now makes up a substantial portion of overall commercial sector energy use. Clear product differentiation, lack of model procurement specifications, and product availability are key market barriers in this area. NEEA will work upstream with

manufacturers, distributors and vendors of office equipment to remove these barriers to help ensure better choices for businesses in the Northwest. NEEA will build on previous work supporting the adoption of more energy-efficient desktop computers and broaden this scope to include computer monitors, imaging equipment, servers, and other significant “plug” loads. NEEA will also work to develop decision-maker tools including model specifications, business-case templates, and procurement policies.

***Regional Coordination***

NEEA will coordinate with utilities to identify and support additional economy-of-scale opportunities for the region like options that enhance utility program offerings directed at small commercial customers. Some of these options could leverage related NEEA activity, such as improving roof-top HVAC operating performance or prescriptive design packages that meet 2030 Challenge performance levels for smaller buildings.

***Estimated Energy Savings***

NEEA is placing particular emphasis on developing a robust methodology for estimating savings associated with the business practice changes that are the focus of the BetterBricks initiative. Evaluation efforts to date have validated building-level savings for BetterBricks participants--a critical component of proving that the business practices promoted by BetterBricks result in energy savings. Future evaluation efforts will focus on additional energy savings validation and improved tracking/data collection that allows NEEA to established "deemed" savings values that can be tied to specific business practices.

***Commercial Contributions to Strategic Goals***

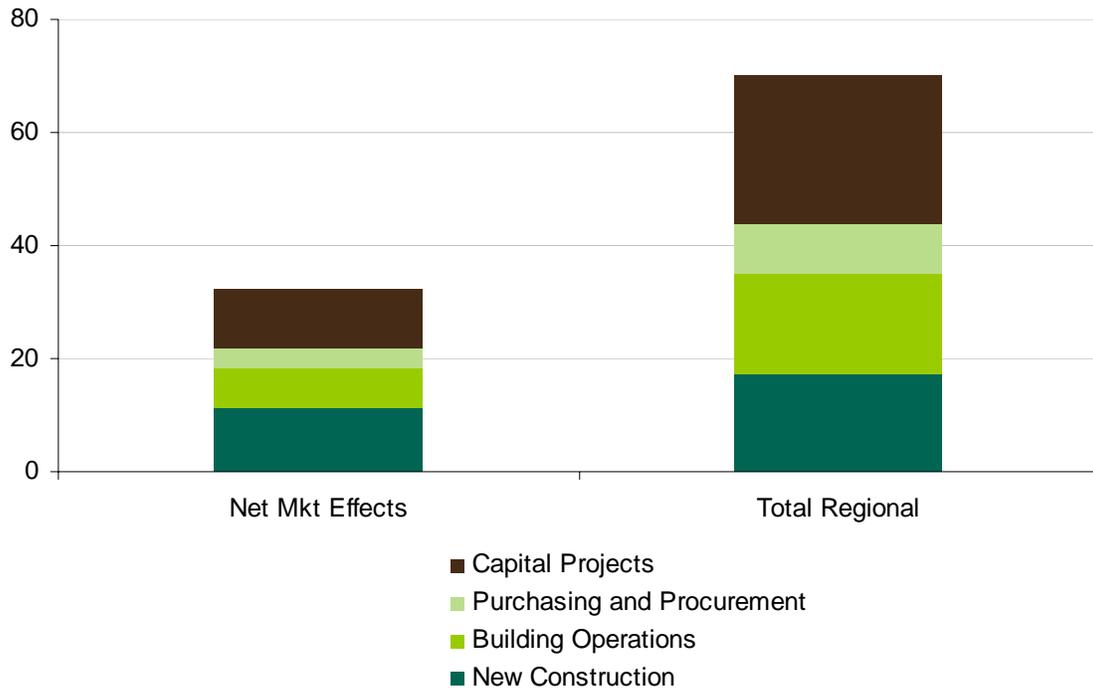
Goal	Key Objectives
<b>aMW Savings</b>	<ul style="list-style-type: none"> <li>• By 2014 NEEA, regional utilities, and market partners collaborate to change Northwest markets resulting in 70 aMWs of total regional savings (182 total regional aMWs by 2019)</li> <li>• At least 32 and 56 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively</li> </ul>
<b>Increase Market Adoption</b>	<ul style="list-style-type: none"> <li>• Make energy efficiency an integral part of business decision making in targeted commercial markets.</li> <li>• Increase the efficiency of new commercial buildings in support of the 2030 challenge.</li> <li>• Increase the efficiency of existing commercial building operations by 10-30%.</li> </ul>
<b>Help EE Organizations Achieve Goals</b>	<ul style="list-style-type: none"> <li>• Validate replicable energy savings associated with sustained practice of strategic energy management.</li> <li>• Two-thirds of northwest energy efficiency organizations (utilities,</li> </ul>

	<p>Energy Trust Oregon, Bonneville, state and local programs) include components of strategic energy management in their own programs to achieve higher levels of energy savings.</p>
<p><b>Build Market Capability</b></p>	<ul style="list-style-type: none"> <li>• Advance architect, design engineer and contractor capabilities to employ integrated design approaches, tools and resources that result in buildings that meet 2030 Challenge performance levels (50% better than current practice).</li> <li>• Advance building service provider and operator capabilities to deliver building operating performance levels that are 10-30% better than current practice.</li> <li>• Develop and deliver strategic energy management training curricula for business that results in predictable participant behavior/business practice change tied to measurable and replicable energy savings.</li> <li>• Advance the knowledge/practice of energy efficiency as a core part of professional development (e.g. training and education; continuing education; certifications) in partnership with others, including trade associations and utilities/public benefits administrators.</li> </ul>
<p><b>Support the Region’s Efforts to Promote Energy Efficiency</b></p>	<ul style="list-style-type: none"> <li>• Key environmental/sustainability organizations and market influencers (e.g. Building Owners and Managers Association, American Institute of Architects, American Society of Heating, Refrigerating and Air-Conditioning Engineers, U.S. Green Building Council) that have an impact in the Northwest integrate energy efficiency into their efforts.</li> </ul>

**Commercial 2010–2014 Estimated Budget**

Hospitals/Healthcare	\$	3,000,000
Office Real Estate	\$	3,750,000
Design & Construction	\$	12,750,000
Building Operations	\$	10,750,000
Regional Coordination	\$	2,250,000
Evaluation & Market Research	\$	3,200,000
Performance Mgmt, Tracking & Reporting	\$	800,000
Staffing and Related Expenses	\$	6,500,000
<b>TOTAL</b>	<b>\$</b>	<b>43,000,000</b>

**Commercial 5-Year Estimated aMW Savings**



### 4.1.3 Industrial and Agriculture, Estimated 5-Year Budget: \$34.2 Million

	Estimated 5-Year aMW Savings	Estimated 10-Year aMW Savings
Net Market Effects	27	50
Total Regional	58	140

At roughly 5,500<sup>5</sup> aMW per year, the industrial and agricultural sectors are the largest electrical energy consumers in the Northwest with an estimated savings potential ranging between 420 aMW and 820 aMW<sup>9</sup>. These energy savings represent more than just a resource for the region’s electrical system; they represent a significant opportunity for diverse Northwest manufacturing industries to achieve or maintain a competitive advantage in today’s global market place.

Despite the energy savings potential for this sector, significant barriers have prevented the region as a whole from realizing the available industrial energy efficiency potential. These barriers can be characterized as:

- A lack of technical solutions developed in collaboration with specific industry segments;
- A near-exclusive focus on short-term tactical programs;
- A lack of collaboration among industry, utilities and government at a regional level.

#### Additional Value Delivered Through The Plan

Collaboration with industry associations like the Northwest Food Processors Association to incorporate energy efficiency into the association’s and their member’s long term corporate objectives.

Access to strategic energy management resources, trade allies and tools.

Increased technical solutions developed regionally for utilities to offer their customers.

<sup>9</sup> NPCC 6<sup>th</sup> Conservation Plan Industrial Supply Curve, Regional Technical Forum Presentation January 6, 1008

Acquiring energy efficiency within the industrial and agricultural sectors is no simple task. Within industry, energy efficiency competes with production and quality initiatives—initiatives that have long histories of quickly and tangibly influencing a company’s bottom line. Within agriculture, competing initiatives for water and for crop production also compete with capital for energy efficiency projects. Based on key learnings from the 2005-2009 funding cycle, NEEA’s strategy for 2010-2014 addresses these region-wide barriers through three integrated initiatives. Together, these initiatives support NEEA’s mission and work in tandem with the region’s stakeholders to create sustainable energy savings in the industrial and agricultural sectors. The three initiatives are:

1. **Collaborative Energy Strategies** – This initiative convenes and mobilizes executive management by leveraging existing industry groups (trade associations, alliances, geographic clusters or government-led clusters) to set industry-wide energy intensity reduction targets and create plans to achieve those targets. Once plans are in place, the initiative fosters national, regional, state, and local partnerships to support the industry group in achieving short- and long-term energy objectives.
2. **Strategic Energy Management (SEM)** – This initiative provides a framework for utilities and market players to support companies in integrating energy management into their company cultures, beginning with the executive suite and extending to the shop floor. This framework institutionalizes a systemic, corporate-wide approach to energy efficiency that enables companies to manage energy as a controllable expense.
3. **Regional Coordination** – This initiative focuses on partnerships with regional stakeholders to develop energy efficient, market-ready offerings that Northwest utilities can provide to their industrial and agricultural customers.

Combined, these three initiatives weave a focus on industry-wide efforts, company- or plant-specific activities and ongoing technical support through utilities to individual customers.

### ***Collaborative Energy Strategies***

By working directly with industry executives through industry groups, NEEA forges partnerships among industry, utilities, and government to enable shared perspectives on critical energy issues. These groups, which can include industry associations, industry alliances, geographic clusters or government-led clusters, provide a trusted reference point which can focus on energy efficiency at a broad level. Through this approach, NEEA promotes dialogue so participants understand the issues, find commonalities on which to build energy strategies, uncover mutual objectives and create a joint plan for saving energy.

From 2010 – 2014, NEEA will use its proven approach in the food processing industry as a template to implement Collaborative Energy Strategies in at least three energy-intensive industries in the region. This replication of process is designed to steadily decrease NEEA involvement with each subsequent group. Key elements of this strategy will include working with industry groups in developing an industry-wide energy plan and supporting them with industry-wide:

1. Design of Programs
2. Tracking of Energy Savings
3. Implementation of Program Elements
4. Development of Infrastructure
5. Innovation of Industry Specific Processes and Technologies (supported and funded by the Emerging Technologies Business Unit)
6. Dissemination of Industry-Specific Best Practices

All of these activities will leverage available resources such as national initiatives through the U.S. Department of Energy, existing regional efforts (e.g. BPA), and local utility efforts.

In 2010-2014, NEEA will continue to work with the Northwest Food Processors Association, which represents an annual consumption of more than 800 aMW<sup>10</sup>, to secure collaborative partnerships that support industry in achieving energy-intensity reduction objectives; documenting and disseminating industry-specific best practices, key learnings and approaches to overcoming barriers to adoption of industrial energy efficiency measures. Central to this strategy is the partnership with the U.S. Department of Energy which has helped fund and develop the approach and helps support its implementation and dissemination of the approach into other industries.

The framework developed with the food processing industry will be leveraged in work with other industries, such as the pulp and paper industry to engage in a partnership with forest products industry associations, U.S. Department Of Energy, and regional stakeholders in adopting an industry-wide plan to reduce energy intensity. NEEA will employ the best practices and framework from these industries to affect other industry groups. By 2014, NEEA plans to work with a total of four additional industry groups, so that collectively, NEEA will address 50% of the region’s industrial load.

***Strategic Energy Management***

As energy prices increase, industrial and agricultural companies in the Northwest are facing significant challenges, including erosion of already-slim profit margins. Embedded energy costs are typically managed separately from product costs and are often assumed to be insignificant to other production costs. As electricity and natural gas prices rise quickly, that assumption is no longer valid for most of the region’s industrial companies. Companies are now looking for an approach that uses proven industry management techniques and can be integrated into existing management

**Strategic Energy Management**



<sup>10</sup> NPCC 6<sup>th</sup> Conservation Plan Industrial Supply Curve, Regional Techn

practices. According to the NWPCC's 6<sup>th</sup> Conservation Plan Industrial Supply Curve (Regional Technical Forum Presentation January 6, 2008) energy management has the potential to deliver approximately 200 aMW by 2030.

A successful energy management system is generally characterized by:

- Measurement and reporting systems
- Assessments and technical potential
- Employee awareness and behavior
- Executive commitment and proper organizational structure

By working in collaboration with industrial companies and electric utilities, NEEA is developing a definition of energy management that is:

1. Practical for facilities to implement
2. Complementary to utility programs and industry-wide initiatives
3. Based on proven industrial management practices and
4. Leads to tangible short-term and long-term results

NEEA's approach to Strategic Energy Management provides a fundamental framework to permanently embed energy management as a core business practice throughout industry in the Northwest. To achieve this, NEEA focuses on creating industrial energy management as a viable, for-profit market by generating demand for energy efficiency among industrial energy users and enhancing supply of energy efficient products, services and practices from qualified providers.

NEEA increases the market availability and support for Strategic Energy Management through a comprehensive approach that includes six key elements:

1. Continued Development and Refinement of the Practice of Strategic Energy Management
2. Collaboration with Electric Utilities
3. Energy Management Education and Training
4. Standards Development
5. Service Provider Development
6. Demonstration Projects

Through the implementation of these six elements, NEEA expects 16% of all Northwest industries to adopt and implement an energy management policy by 2014. NEEA will also work to ensure that Strategic Energy Management can be integrated into utility industrial and agricultural programs in the Northwest.

### ***Regional Training***

Since 2005, NEEA has coordinated industrial training in the Northwest, proving not only market demand across nine regions, but across multiple industries as well. To date, industrial training has focused on systems that drive industrial production: motors, pumps, compressed air, and refrigeration.

As NEEA continues to coordinate regional industrial training, the organization will look to industry to help define the training and education needs of its workforce, and to investigate delivery methods, such as distance and web-based learning, to ensure not only that curricula, but the format in which it has been delivered continues to support industry in meeting the challenges of a carbon constrained economy.

***Regional Coordination***

NEEA will collaborate with utilities, industry and the agricultural sector in the Northwest to identify market-ready industrial programs with components that can be customized by each utility to best meet its business needs. A priority for these efforts will be irrigation. The Industrial and Agricultural Sector Staff will coordinate with the Emerging Technologies and Partner Services business units to help disseminate best practices and identify research opportunities in this area.

***Estimating Energy Savings***

NEEA is placing particular emphasis on developing a robust methodology for estimating savings associated with Strategic Energy Management (SEM). Evaluation efforts to date have validated facility-level savings for SEM participants—a critical component of proving that the business practices SEM comprises result in energy savings. Future evaluation efforts will focus on additional energy savings validation and on advancing a top-down approach to estimating facility-level energy savings that allows NEEA to establish "deemed" savings for SEM.

***Industrial and Agricultural Contributions to Strategic Goals***

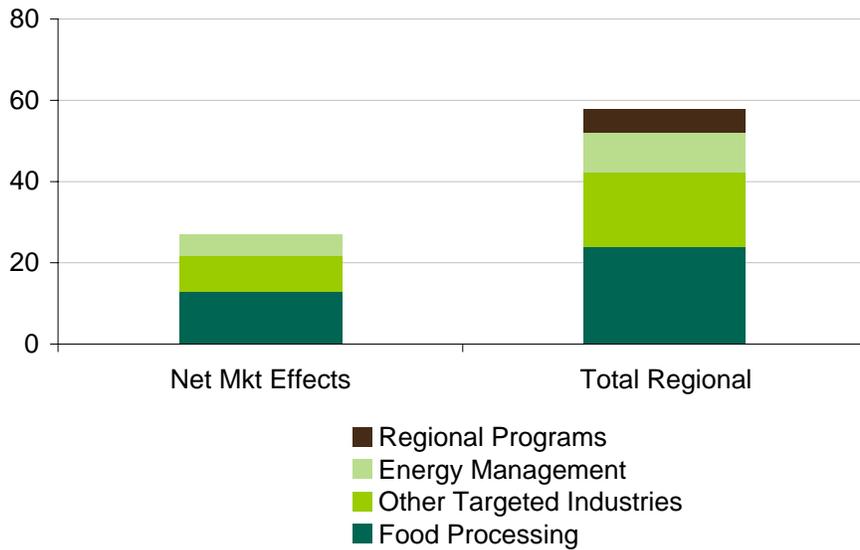
Goal	Key Objectives
<p><b>aMW Savings</b></p>	<ul style="list-style-type: none"> <li>• By 2014 NEEA, regional utilities, and market partners collaborate to change Northwest markets resulting in 58 aMWs of total regional savings (140 total regional aMWs by 2019)</li> <li>• At least 27 and 58 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively</li> </ul>

<p><b>Increase Market Adoption</b></p>	<ul style="list-style-type: none"> <li>• Food Processing: provide tools &amp; resources that enable the industry to reach its energy management goal of 25% reduction in 10 years.</li> <li>• Pulp and Paper: influence a key regional/national industry association (Technical Association of the Pulp &amp; Paper Industry, American Forest &amp; Paper Association, etc) to adopt a NW energy intensity reduction goal.</li> <li>• Industry groups representing at least one-third of Northwest industrial load adopt a goal of energy intensity reduction</li> <li>• Prove the concept of energy management as a management approach that delivers substantial energy savings</li> </ul>
<p><b>Help EE Organizations Achieve Goals</b></p>	<ul style="list-style-type: none"> <li>• Validate replicable energy savings associated with sustained practice of strategic energy management</li> <li>• Northwest energy efficiency organizations (utilities, Energy Trust Oregon, Bonneville, state and local programs) integrate strategic energy management into their offerings.</li> <li>• Develop at least three industrial and agricultural regional technical solutions that utilities can provide their customers.</li> </ul>
<p><b>Build Market Capability</b></p>	<ul style="list-style-type: none"> <li>• Provide training/technical support to management consulting companies (e.g., ISO and Lean consultants) so they are able to deliver energy management services to industrial and agricultural customers</li> <li>• Develop and deliver a suite of standardized energy management training curricula for industrial trade allies that result in predictable participant behavior/business practice change that can be tied to measurable and replicable energy savings</li> <li>• Advance the knowledge/practice of energy efficiency as a core part of professional development (e.g. training and education; continuing education; certifications) in partnership with others, including associations, utilities/public benefits administrators and trade ally associations.</li> <li>• Support development of standards related to energy management including the completion of ISO 50001.</li> </ul>
<p><b>Support the Region's Efforts to Promote Energy Efficiency</b></p>	<ul style="list-style-type: none"> <li>• Key environmental and sustainability organizations and key market influencers (e.g. Northwest Food Processors Association, Technical Association of the Pulp and Paper Industry) that have an impact in the Northwest integrate energy efficiency into their efforts.</li> </ul>
<p><b>Facilitate Regional Planning and Implementation</b></p>	<ul style="list-style-type: none"> <li>• Facilitate the development of a roadmap for reaching the NWPC's 6<sup>th</sup> Power Plan's Industrial potential.</li> </ul>

***Industrial 2010–2014 Estimated Budget***

Food Processing	\$	3,930,000
New Industries	\$	7,620,000
Strategic Energy Management	\$	9,979,000
Regional Training	\$	2,000,000
Regional Coordination	\$	1,200,000
Evaluation & Market Research	\$	2,880,000
Performance Mgmt, Tracking & Reporting	\$	800,000
Staffing and Related Expenses	\$	5,750,000
<b>TOTAL</b>	<b>\$</b>	<b>34,159,000</b>

***Industrial 5-Year Estimated aMW Savings***



#### **4.1.4 Codes and Standards, Estimated 5-Year Budget: \$7.4 Million**

Policy makers at the federal, state and local levels have recently passed legislation or issued executive orders to significantly increase the stringency of energy codes as a key strategy to reduce energy use and consequently global warming. NEEA has played a key role in creating new codes to help achieve policy makers' stringency goals. Over the past 12 years, NEEA has worked within the region to support the development of energy codes that are practical, effective and grounded in market realities. Once codes are adopted, NEEA provides education, training and technical support to hundreds of local jurisdictions which implement the codes. This supports high compliance rates that in turn maximize energy savings.

Similarly, NEEA has played a role in standards efforts at the U.S. Department of Energy. NEEA has provided documented market and technical input into the public process hearings which determine national appliance and equipment standards. By providing market data and experience, NEEA's participation has allowed the Northwest to have a significant influence in the standards process.

NEEA also participates in organizations/forums/processes which determine voluntary codes and standards, particularly those with a direct connection to NEEA's core sector initiatives. Examples include LEED and ENERGY STAR. For initiatives that extend beyond energy (i.e. "sustainability" or "green"), NEEA will work to ensure that minimum energy efficiency requirements are significantly higher than applicable mandatory codes and standards.

More stringent codes and standards save energy in all buildings, benefiting both ratepayers and utilities. Furthermore, codes and standards set the floor for efficiency. As that floor is raised, voluntary programs and market actors seeking to differentiate themselves are forced to improve. This dynamic ensures a constant influx of new efficiency approaches and technologies into the market. NEEA is the only organization which comprehensively addresses energy codes in all four northwest states. NEEA has been by far the largest funder of energy code support in the Northwest for more than ten years.

Codes and standards play a key role in "locking-in" energy savings that have been demonstrated through voluntary programs. Together, the voluntary and code efforts represent a substantial energy savings resource. A recent example of this synergy can be found in the relationship between Oregon's recent residential energy code that was based largely on provisions pioneered in the ENERGY STAR Homes Northwest program. Other examples exist in consumer products such as high-efficiency clothes washers and in commercial new construction with day lighting.

In recognition of the relationship between voluntary programs and codes, the savings from both have been combined and are reported under the "new construction" category for both residential and commercial sectors. However, if they were counted separately, the five-year total regional and net market effects savings from codes are projected to be 29 aMW and 21 aMW respectively."

Specific savings for efficiency standards are not included in the energy savings projections for this Business Plan. This is due to the high levels of uncertainty around both what levels of efficiency will ultimately be adopted as well as what level of attribution can be credited to NEEA. However, the savings from these efforts could be very substantial for the Northwest, regardless of attribution. If only a portion of the 25 federal standards scheduled for review are made more efficient, it is well within possibility that the region could see over 50 aMW of savings over the five-year Business Plan period and well over 100 over the ten-years of 2010-2019.

### ***Codes and Standards Contributions to Strategic Goals***

<b>Goal</b>	<b>Key Objectives</b>
<b>Increase Market Adoption</b>	<ul style="list-style-type: none"> <li>• In response to policy mandates, support increases in stringency and compliance of energy codes in each of the 4 Northwest states.</li> <li>• NEEA supports the adoption of more stringent efficiency standards for key strategic markets.</li> </ul>
<b>Build Market Capability</b>	<ul style="list-style-type: none"> <li>• Building officials representing 90% of the Northwest population participate in code education/training. Building trade allies representing 75% of the population are aware of/know how to access training/technical assistance resources</li> <li>• Train and educate the residential new construction market: builders, verifiers, real estate agents; space heating market: distributors, contractors; and retailers.</li> </ul>

### ***Codes and Standards 2010–2014 Estimated Budget***

Codes: Support Adoption	\$ 1,100,000
Codes: Increase Compliance	\$ 3,400,000
Standards: Support Adoption	\$ 425,000
Standards: Increase Compliance	\$ 250,000
Voluntary: Support Creation	\$ 425,000
Evaluation & Market Research	\$ 750,000
Performance Mgmt, Tracking & Reporting	\$ 250,000
Staffing and Related Expenses	\$ 800,000
<b>TOTAL</b>	<b>\$ 7,400,000</b>

## 4.2 EMERGING TECHNOLOGIES, ESTIMATED 5-YEAR BUDGET: \$19.8 MILLION

	Estimated 5-Year aMW Savings	Estimated 10-Year aMW Savings
Net Market Effects	0	2
Total Regional	0	23

NEEA’s goal of market change and the region’s collective energy efficiency goals depend on a continuous pipeline of commercially available new energy efficiency technologies and practices. Over the years, NEEA has played a role as an intermediary between laboratories and the market by coordinating demonstrations and evaluations of new technologies and practices and by designing and implementing strategic market interventions that successfully remove barriers to market availability.

Many of the current success stories in energy efficiency — compact fluorescents (CFLs), resource efficient clothes washers, super-efficient windows, and premium efficiency motors — were the result of development work in emerging technologies in the 1980s and early 1990s that were accelerated with market transformation in the 2000s. However, as a result of concerns over stranded costs during deregulation of the electric utility industry in the mid-1990s, work on emerging technologies was significantly ramped down. NEEA’s own efforts have most recently been focused on securing widespread adoption of currently available technologies. As a result, there are currently few new energy efficiency opportunities ready to replace the benefits provided by these more mature technologies.

The emerging technologies business unit of NEEA will help the region begin rebuilding this critical area and filling the efficiency pipeline for the future by managing an ongoing portfolio of commercially viable emerging technologies and practices. This Business Plan defines end-use emerging technologies as efficiency technologies or practices that are commercially available but with low (~1% or less) market share. Further refinement of this definition will be undertaken with advice from the expert advisory committee for emerging technologies. NEEA will identify and develop strategic

### Additional Value Delivered Through The Plan

Reduced exposure to “no coordinated pipeline” risk for emerging technologies.

Reduced costs to NEEA partners for ET work through economies of scale and elimination of duplicative efforts.

Access to information on regional specific application of emerging technologies

interventions to overcome barriers impeding the commercial availability and success of these new efficiency opportunities. NEEA will be measured against this goal by the future energy savings associated with the emerging technology projects that the organization helps become commercially available.

A variety of strategies will be used to discover, assess and initially introduce new products, services, and practices to the market. Basic research and development activities are not in scope. NEEA's work is focused on technologies and opportunities for products that are either commercially available or near commercialization.



Throughout NEEA's operations, NEEA is committed to help ensure that its work in emerging technologies is complementary to other regional activities in the same area. NEEA will coordinate and collaborate with BPA, universities, national labs and others to develop an Emerging Technology initiative that will most effectively leverage existing activities and fill the gaps where NEEA is best suited to serve the region's needs. Our obligation is to assure that the region's needs for emerging technologies are being met.

- 1. Opportunity Discovery and Assessment** – The latest developments in technology and markets that have potential to become significant new efficiency opportunities will be discovered and assessed as follows:
  - **Targeted Market Research** – Market research will be focused on areas of promising opportunity. Projects will consist largely of secondary research summarizing existing work supplemented by primary research as appropriate to the scale of the opportunity.
  - **Relationships with Key Research Institutions** – Research efforts that promise to deliver new commercializable technologies will be identified. Regular contact with and potential partnerships will be established as appropriate with regional universities, national laboratories, and others.
  - **Review of Technology and Market Trends** – Staff time will be dedicated to search out and review publicly available information on new technologies with an

eye towards areas of specific interest to the Northwest and markets which the region could influence.

- **Regional/National Partnerships** – Formal partnerships will be established as appropriate including funding participation in efforts with entities such as U.S. Department of Energy, California’s Public Interest Energy Research, EPRI, etc.
- **Unsolicited Proposals** – This tactic re-invigorates NEEA’s dormant unsolicited proposal process to anyone with new opportunities. This process previously provided some very innovative projects for the region. Solicited proposals may be utilized as well.

**2. Opportunity Confirmation** – This strategy confirms the technical and market opportunities identified in the discovery and assessment stage. Limited field demonstrations and market research will be used to confirm energy savings, performance issues, market size, opportunity and the like. Demonstrations will also provide preliminary confirmation of barriers to market acceptance.

- **Field Demonstrations** – These will include measurement and testing of technical performance in a variety of dimensions. These activities are aimed at understanding real-world impacts of the technology and identifying the full set of technical issues associated with field applications.
- **Market Research** – These projects would include focus groups, or other primary research activities intended to get a preliminary understanding of market response to the new efficiency opportunity. Market research needs to be coupled with technical demonstrations to understand the non-technical dimensions of the project such as business operations impacts of the new technology/practice.

Previous examples of NEEA projects in this category include the original Ductless Heat Pump Demonstration project in Grant County Washington, field demonstrations of the Desert CoolAire Hybrid Evaporative Packaged Rooftop Unit project, and the demonstration of the Laser-Ultrasonic Stiffness Sensor at Boise Cascade’s St Helens paper mill.

**3. Market Introduction: Preparing for full-scale market adoption** – These projects are intended to test emerging opportunities in real market conditions in scale large enough to understand the issues related to a full-scale market intervention effort. These projects would be large enough to allow NEEA to engage with upstream market actors such as manufacturers and distributors to develop key relationships that would support leveraged value to the region under a larger scale effort. They would involve utility partners directly in testing interaction with utility programs.

- **Pilot Projects** – Pilot projects are generally limited in scale to a few markets or geographic regions where the emerging efficiency opportunity is available

through normal market channels and installed in the anticipated applications. Pilot projects are initiated to gather statistically significant data on technical performance, cost and energy savings and to identify remaining technical barriers on either the upstream channel side (manufacturing, distribution or retail) or on the customer side (installation problems, operation difficulties, etc.).

- **Market tests** – Market tests are sometimes conducted in parallel with technical elements of pilot projects but are more focused on the end-user reactions to the emerging technology. Market tests are intended to gather statistically reliable data on end-user attitudes and experiences with the new technology and provide the validation of the original logic model for market transformation by sorting out significant market barriers from those that are less important.

Previous examples of NEEA projects of this type include the Ductless Heat Pump Pilot Project, the Double-Your-Savings rebate pilot for Clothes Washers, and the Envinta One-to-Five Energy Management Practices Pilot project.

4. **Information Services** – This component will leverage the Partner Services communication vehicles (websites, newsletters, conferences, etc.) to provide updates to NEEA partners on activities and results from new and emerging efficiency opportunities. This component would be targeted at developing appropriate content for the various communication needs to the partners.

- **Content Development** – In addition to the formal reports developed as a standard part of the emerging technologies work, NEEA will develop several different levels of content for use in a variety of less technical medium. This content will be delivered and made available for re-publication to NEEA's partners for use in their own communications vehicles.
- **Information delivery (web, print, newsletters, etc)** – NEEA will provide regular updates to its partners on emerging technologies efforts through web content, newsletters and hardcopy as appropriate.
- **Interactive: Conferences, Webinars, etc.** – In conjunction with NEEA's Partner Services business unit, NEEA will provide interactive exchange with regional partners through semi-annual webinars and through sponsorship of an emerging technologies session at regional energy efficiency conferences.

### **Regional Coordination**

Multiple emerging technologies programs are in place across the Northwest. NEEA will work with regional stakeholders to establish a coordinating committee to help guide and coordinate regional emerging technologies efforts. This body will serve as NEEA's expert/advisory committee for emerging technologies efforts, providing a common regional forum for identification of high priority emerging technologies activities and will facilitate implementation coordination of initiatives among the players. The coordinating committee provides the stage for collaboration on individual projects where multiple entities could join together to bring each organization's core strengths to a given project. It would also serve as

a focal point for reporting and review of progress towards regional emerging technology goals.

One example of effective coordination under the coordinating committee would be a joint project targeted at heat pump water heaters (HPWHs) where BPA and the National Labs could take a lead role in conducting laboratory performance testing while NEEA could take a lead role in market research and development of a regional strategy for market introduction of the new product. Other examples would include BPA and NEEA cosponsoring a special workshop on emerging technologies at BPA's annual energy efficiency conference. Emerging technologies was the focus of NEET workgroup #2. The final results of this workgroup will help to further define NEEA's role in this area.

***Emerging Technologies' Contribution to Strategic Goals***

<b>Goal</b>	<b>Key Objectives</b>
<b>Increase Market Adoption</b>	<ul style="list-style-type: none"> <li>• Achieve a 5% market share for a reliable heat pump water heater with performance of at least ENERGY STAR standards for HPHW (50% savings over standard HWH).</li> </ul>
<b>Increase Market Availability of Emerging Technologies</b>	<ul style="list-style-type: none"> <li>• Identify and pursue the highest priority energy efficient emerging technology opportunities and manage a portfolio estimated to deliver 300 aMW by 2030.</li> <li>• Partner with California on at least one research collaborative that leverages NEEA funding</li> <li>• Conduct and disseminate at least three actionable market research projects annually that influence industry directly or indirectly through NEEA activities.</li> <li>• Design practical pathways to achieve interim milestones for the 2030 Challenge for Net Zero Energy/Carbon Buildings:             <ul style="list-style-type: none"> <li>• a. Design prototypes for at least 2 targeted markets that achieve energy savings of at least 50% over current practice and are the basis for real projects completed or under construction by 2014</li> <li>• b. Develop simplified approaches for design-build markets that achieve energy savings of at least 50% over current practice and are the basis for at least 5 real projects completed or under construction by 2014.</li> </ul> </li> <li>• Identify and demonstrate at least two next generation energy efficient products and services for information technologies including office equipment, servers and datacenters</li> <li>• At least two industrial process innovations are developed, demonstrated and ready for market adoption in partnership with targeted industries consistent with their industry-wide goals.</li> </ul>
<b>Facilitate Regional Planning and Implementation</b>	<ul style="list-style-type: none"> <li>• Develop and gain regional commitment to comprehensive market strategic plans for at least two of NEEA's major initiatives; these plans have shared goals and defined roles for all regional energy efficiency players. (Heat Pump Water Heaters and the residential water heating market)</li> </ul>

***Emerging Technologies 2010–2014 Estimated Budget***

Discovery and Assessment	\$	1,435,000
Confirmation	\$	5,175,000
Pilot Projects/Market Tests	\$	9,250,000
Information Services	\$	250,000
Evaluation	\$	350,000
Staffing and Related Expenses	\$	3,316,000
<b>TOTAL</b>	<b>\$</b>	<b>19,776,000</b>

## 4.3 PARTNER SERVICES, CORPORATE COMMUNICATIONS, AND REGIONAL MARKET RESEARCH/EVALUATION

This business unit comprises three distinct business functions, all of which include delivery of value-added information services to NEEA’s stakeholders.

### 4.3.1 Partner Services & Communications, Estimated 5-Year Budget: \$13.1m

During the extensive planning outreach efforts, stakeholders made it clear that they want NEEA to step up its efforts to provide services for utility/energy efficiency program staff. The Partner Services business unit described in this plan comprises a variety of services that NEEA will provide to support its funders’ and stakeholders’ energy efficiency programs.

The goal of Partner Services is to support utilities and other energy efficiency organizations. ***NEEA will determine the specific services to be provided based on the needs and priorities of its funders.*** Based on feedback to date, this Business Plan assumes Partner Services will include information services, and events and training.

**Information Services** – Stakeholders clearly expressed the desire for a “clearinghouse” for energy efficiency information services. Stakeholders mentioned a variety of topical areas they would consider valuable, including information on best practices, emerging technologies, a compendium of utility marketing communications, and many others. NEEA will make information available to stakeholders via web-based tools that are easily accessible and that allow stakeholders to provide content to their customers. NEEA will work closely with its partners to prioritize information content, tools, and services that stakeholders find most valuable.

**Events and Training** – In addition to delivering regional information services, NEEA plans to host at least two annual regional conferences or forums on topics of interest to regional partners (e.g. energy efficiency program best practices, emerging technologies) that allow them to exchange information with colleagues and industry experts. NEEA also plans to coordinate two training events per year for energy efficiency program staff on topics of interest to them (e.g. customer segmentation and program marketing).

#### Additional Value Delivered Through The Plan

Economies of scale associated with regional information services, events, and training.

Services for utilities with fewer resources helps deliver on the promise of regional equity

Mechanism for sharing information among utilities allows region to accelerate learning

**Partner Services Delivery** –NEEA will deliver partner services through a variety of mechanisms that best suit the objectives of the service. These mechanisms will likely include (but are not limited to):

**Web site(s)** – Stakeholders have expressed the desire for a “one-stop shop” for energy efficiency information. NEEA envisions developing its web site to serve as portal to a variety of information resources for energy efficiency programs. These resources will likely include information on best practices, emerging technologies, a database of utility energy efficiency program information (e.g., plans, programs, program materials), customizable marketing and information tools for customers, market research/evaluations and key findings, building characteristics databases (e.g., Commercial Building Stock Assessment), standardized surveys/questionnaires and methodologies, and links to available information from NEEA partners.

**In-person events** – Although web-based information is generally the most easily accessible and economical way to share information, stakeholders value the opportunity to interact in person with and with their counterparts at other utilities in the region. Periodic in-person workshops and forums present an opportunity to share and discuss ideas, and also allow the opportunity for in-depth exploration and discussion of specific topics. NEEA anticipates conducting or partnering on at least two in-person events and per year.

**Web-based events** –While in periodic in-person events offer the opportunity for valuable discussion and networking, time and money constraints can make travel difficult or impossible. NEEA recognizes this reality, and will also make partner services accessible via web-based events.

**Circuit rider** – NEEA has heard clearly from stakeholders—particularly those located in areas remote from the I-5 corridor that they value direct contact with NEEA staff. In response to this feedback, this business plan includes funding for a “circuit rider” who will periodically visit utilities throughout the region. This person will ensure that NEEA is able to more equitably incorporate the interests of the entire region and that all stakeholders are aware of NEEA’s activities and how they can potentially help them achieve their goals.

### ***Partner Services Coordination***

NEEA is committed to executing its partner services activities in a way that avoids overlap with the activities of other energy efficiency organizations; *NEEA would not re-create or duplicate information services or events that are already offered by other entities.* The process for identifying the most valuable information services and avoiding duplication will include:

1. Identify stakeholders’ unmet needs, via regular communication with NEEA expert committees, regional forums, and utility/energy efficiency program staff

2. Identify already-existing resources that can be leveraged/modified/extended to meet those needs (i.e., don't "re-invent the wheel")
3. Develop plans for new/modified/extended services in coordination with stakeholders, to ensure that those services complement—not duplicate or compete with—services that are already offered or planned.

So, for example, if stakeholders were to identify the need for a marketing toolkit for CFLs, and if BPA already plans to provide that to its customers, NEEA would work in concert with BPA to figure out the best way to make that resource available to *all* Northwest utilities. NEEA would *not* duplicate or compete with that service. Another example might be information on emerging technologies. Several organizations track development of emerging technologies (e.g. E-Source, EPRI). If stakeholders identify a need for this information, NEEA will first determine what already exists, and work with stakeholders to identify the most efficient approach for making the information they need accessible to them.

### ***Corporate Communications***

Partner services will be tightly coordinated with NEEA's corporate communications function. Whereas Partner Services is focused on resources to support utility programs, Corporate Communications is focused on communication related to all of NEEA's activities. NEEA's corporate communications function comprises three primary areas: funder reporting; funder relations; and stakeholder/public communications.

**Funder Reporting**—Funder reporting includes periodic and ad hoc reports to and for NEEA's funders, such as NEEA's corporate annual report, an annual and quarterly report of aMW savings and other non-energy results at the service territory level, a regular report of accomplishments to NEEA's funders, and ad hoc reports of accomplishments in particular states or regions as required. These reports will help directly address accountability, as well as NEEA's core value of transparency and openness. The reports could be used for other uses (ie. to help utilities with load forecasting).

**Funder Relations**—This Business Plan calls for NEEA to work closely with its funders to help them achieve their goals. Under this plan, NEEA will implement a more formal system of outreach and two-way communication than NEEA has had the resources for in the past. Specific activities will include NEEA's participation in and coordination of regional energy efficiency forums, periodic in-person meetings, and more frequent conversations with stakeholders. Success will be measured via NEEA's annual stakeholder satisfaction survey and other feedback. These efforts will be tightly integrated with partner services activities as well as regional planning activities.

**Stakeholder/Public Communications**—This business unit is also responsible for NEEA's ongoing communications with stakeholders and the public. Such communication serves to keep interested parties informed about NEEA's activities,

and maintains/builds NEEA’s influence with regional and national market actors, which can be leveraged for the benefit of Northwest stakeholders.

Specific communications activities include the NEEA Newsletter, the NEEA web site, the NEEA Annual Report, and various ad hoc requests for information. Corporate Communications also supports NEEA’s efforts to conduct regular outreach and participates on boards and decision-making forums with influential organizations. It will also initiate activities that better establish the Northwest’s leadership in energy efficiency, such as an annual “state-of-the-region” report that summarizes the region’s energy efficiency activities, and regional awards to spotlight the best regional programs.

***Partner Services & Corporate Communications Contribution to Strategic Goals***

Goal	Key Objectives
<p><b>Help EE Organizations Achieve Goals</b></p>	<ul style="list-style-type: none"> <li>• Communicate with energy efficiency partner organizations on a regular basis to understand their needs and priorities discuss NEEA partnership and identify areas for improvement/added value, and maintain a stakeholder focused organization.</li> <li>• Provide information services to NEEA partners to support energy efficiency programs. Services will include best practices, emerging technologies, market information, and “syndicated content”/technical services that can be used to add value to customers.</li> <li>• Host two annual regional conferences/forums on topics of interest to regional partners (e.g. best practices, emerging technologies) that allow them to exchange information with colleagues and industry experts.</li> <li>• Coordinate two training events per year for energy efficiency program staff on topics of interest (e.g. customer segmentation and program marketing)</li> </ul>
<p><b>Support the Region’s Efforts to Promote Energy Efficiency</b></p>	<ul style="list-style-type: none"> <li>• Ensure key EE messages and regional accomplishments through NEEA are included as part of news coverage in targeted publications</li> </ul>

**Partner Services and Communications 2010 – 2014 Estimated Budget**

Information Services	\$	1,250,000
Conferences/Forums	\$	1,000,000
Training Events–Program Staff	\$	1,000,000
Communications	\$	3,525,000
Staffing and Related Expenses	\$	6,326,000
<b>Total</b>	<b>\$</b>	<b>13,101,000</b>

### 4.3.2 Regional Evaluation, Market Research and Assessments (\$9.6 M)

**Regional Data Collection Needs & NEET**—There is broad agreement that the region needs and is willing to pay for a regionally coordinated data collection effort. Concurrent with the development of this Business Plan, the Northwest Energy Efficiency Taskforce—Workgroup #1 identified five types of regional market research and evaluation that the region needs: (1) Building characteristics studies (2) evaluation studies (3) market characterizations/opportunity assessments, and (4) marketing research, and (5) Cost reviews. NEEA has been engaged in all of these activities since its inception, but past efforts have been somewhat ad hoc due to lack of specific Business Plan objectives and budget. NEET Workgroup #1’s final recommendations were for NEEA to assume responsibility for areas (1), (3), and (4), as well as shared responsibility with the RTF for (2), with the RTF taking responsibility for (5). It envisioned the RTF taking on responsibility for planning and coordinating regional data collection needs, and creation and maintenance of a regional clearinghouse for data and data collection tools. It is estimated that the total cost to meet the identified regional data coordination and collection needs at \$8-10M per year. The recommendation also called for an independent evaluation of the RTF.

In response to Work Group #1’s recommendation, the NEET Executive Committee requested that NEEA project manage an independent evaluation of the Regional Technical Forum (RTF) in 2009, evaluating its structure, role and funding and determining what changes (if any) are needed to address today’s changing environment. The study is intended to inform any future decisions about the RTF’s role and responsibilities.

**Regional Data Collection by NEEA**—NEEA developed this Business Plan concurrently with the efforts of WG #1. It includes resources for some—but not all—of the WG #1 recommendations to the NEET Executive Committee. The following section describes the types of regional data collection activities that are included in the plan. In brief, the plan:

- fully funds regional building characteristics studies (residential, commercial and industrial) (1),
- provides some funding for marketing research (4)
- provides some funding for the other 3 data collection categories—evaluations (2), market characterizations (3) and cost reviews (5)—but it is limited to markets/technologies/initiatives that are part of NEEA’s portfolio.<sup>11</sup>
- includes budget for 1.5 FTE to coordinate and project manage regional studies.

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<sup>11</sup> Resources for these three data collection categories are contained within the sector and emerging technology budgets, under the “market research and evaluation” line item. Based on past experience, NEEA estimates that approximately 50% of those line items will go toward these categories.

- includes \$700,000 for the creation of a web-based clearinghouse to house data collection tools and results<sup>12</sup>
- includes \$1,000,000 for ongoing market tracking and monitoring of initiatives that NEEA has funded in the past and in which the region continues to be interested (e.g., CFLs).

In total, between the budget shown here and that in the sector and emerging technology budgets, NEEA's Business Plan includes approximately \$3 million per year for regional data collection activities. Additional description of data collection activities follows:

- **(1) Regional building characteristics studies**—NEEA has been conducting these studies consistently for the last 10 years, and stakeholders have unanimously told NEEA that it should continue to do so. NEEA will improve upon past efforts by establishing a more formal regional market research and assessment function that coordinates with regional planning timelines, is fully funded to meet regional needs, and includes creation of a regional clearinghouse for study methodologies, protocols/processes – including data collection instruments, and results. These activities will provide a common foundation to the region's energy efficiency organizations for planning and implementation of energy efficiency initiatives. When NEEA conducts these studies, the region benefits from substantial economies of scale and coordination. The budget for these studies is shown in this business unit.
- **(2) Regional Evaluations**—NEEA has conducted regional evaluations to quantify the energy consumption impact of specific technologies on an as-needed basis. Examples include the current efforts underway to evaluate energy savings associated with ENERGY STAR New Homes and with Ductless Heat Pumps. NEEA will continue efforts to quantify the impact of technologies associated with the initiatives it funds. The budget for these evaluations is included in the relevant sector and emerging technologies business units, reflecting the integral role they play in the overall project implementation.
- **(3) Regional Market Assessments**—NEEA has regularly conducted market research and assessments over the past 10 years whenever it is assessing opportunities for market transformation initiatives. NEEA will continue to play this role going forward. The budget for these assessments is included in the relevant sector and emerging technologies business units, reflecting the integral role they play in initiative planning.
- **(4) Regional Marketing Research**—As discussed in relation to NEEA Strategic Goal #5, this Business Plan calls for NEEA to provide marketing research to support

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<sup>12</sup> This budget is substantially smaller than that called for by NEET Work Group #1 (\$1 million for development, plus \$300K-\$500K annual maintenance). NEEA believes that the budget in this plan is sufficient to develop a basic clearinghouse function to house regional studies, and that can be expanded upon/upgraded as needed.

behavior change associated with energy efficiency. Based on the recommendations of NEET Taskforce #4, the NEET Executive Committee asked NEEA to summarize existing research and its implications, and to identify what other marketing research is needed. NEEA will conduct additional marketing research to the extent that regional stakeholders find it appropriate for NEEA to do so. In addition to conducting the research, NEEA is well-positioned to disseminate findings and recommendations for marketing strategies (e.g., messaging; media; targeting) based on that research.

- **(5) Cost Reviews**—NEEA collects cost data on an ad hoc basis to support cost-effective analysis and market progress assessment of the initiatives in its current and past portfolio. The budget for this data collection activity is included in the relevant sector business units and in the long-term monitoring and tracking line item below.
- **Long-Term Monitoring and Tracking**—The budget for this functional area also includes the continuation of long-term monitoring and tracking of market transformation initiatives once they are no longer being actively funded. This activity allows NEEA and the region to quantify energy savings that result in the latter stages of market transformation and to keep abreast of market penetration.

***Regional Evaluation and Research Contribution to Strategic Goals***

Goal	Key Objectives
<p><b>Support the Region’s Efforts to Promote Energy Efficiency</b></p>	<ul style="list-style-type: none"> <li>Identify needs, coordinate, conduct and disseminate actionable findings from regional marketing research that supports the region’s efforts to promote energy efficiency.</li> </ul>
<p><b>Facilitate Regional Planning and Implementation</b></p>	<ul style="list-style-type: none"> <li>Plan, coordinate, and deliver region building characteristics studies for the Residential, Commercial and Industrial sectors on an ongoing basis — with timing that aligns with regional planning needs. Make methodologies, instruments and data available and easily accessible to the region in an online clearinghouse.</li> </ul>

***Regional Evaluation and Market Research 2010–2014 Estimated Budget***

Building Stock Characteristics (BCS) Studies–Residential	\$ 2,000,000
BCS Industrial	\$ 1,250,000
BCS-Commercial	\$ 3,000,000
Clearinghouse Development/Mgmt	\$ 700,000
Long-Term Monitoring & Tracking	\$ 1,000,000
Marketing Research	\$ 500,000
Staffing and Related Expenses	\$ 1,176,000
<b>TOTAL</b>	<b>\$ 9,626,000</b>

## 4.4 BUSINESS PLANNING AND OPERATIONS

NEEA Business Planning and Operations comprises multiple functions, all poised to both advance and support the efforts outlined in this Business Plan.

### 4.4.1 Business Planning

NEEA's business planning unit will comprise the following areas: Strategic and Business Planning, Business Development, Portfolio Management, Cost Benefit analysis and reporting and Market/Program Planning Support. Following are the strategic objectives that are the primary focus of business planning:

- NEEA's funders identify market transformation through NEEA as part of their energy efficiency portfolio
- All NEEA funders count NEEA-reported net market effects toward their energy efficiency accomplishments
- Develop and implement a portfolio management system to ensure NEEA's portfolio is optimized
- Deliver annual energy savings reports to NEEA funders to support rate recovery.
- As appropriate, develop a regional "Fuel-Neutral" Action Plan consistent with NEEA's new mission statement; develop appropriate operational and business service changes to accommodate recommendations arising from the plan
- Develop and gain regional commitment to comprehensive market strategic plans for at least two of NEEA's major initiatives; these plans have shared goals and defined roles for all regional energy efficiency players.
- Assist and support the development of regional action plan for energy efficiency.

### NEEA Portfolio Management System

The NEEA Portfolio Management is a management process that will become an integral part of NEEA's decision making and will help NEEA acquire and view information about all of its initiatives/projects, then sort and prioritize each according to certain criteria, such as strategic value, impact on resources, cost, and so on, to best achieve the organization's goals and objectives.

NEEA will develop and implement a portfolio management system to support project adoption, emphasis and termination decisions. This system and processes will be transparent, help ensure ongoing efficiency and accountability, and provide stakeholders insight into portfolio management criteria (e.g. contribution to Business Plan objectives, regional equity, resource requirements, risk, initiative performance to date). Like any good system of checks and balances, NEEA's portfolio management system will help NEEA remain nimble and flexible during wholesale or incremental changes in the economic/environmental landscape.

## **Annual Energy Savings Reporting to Support Rate Recovery**

NEEA is committed to providing energy savings tracking and reporting sufficient to allow for rate recovery of NEEA expenses. For NEEA's direct funders, NEEA will be collecting and reporting energy savings data at the service-territory level.

## **Fuel-Neutral Action Plan**

A large proportion of northwest residences, businesses, and industry are currently served by multiple energy sources. Improving energy efficiency for these end users is inherently a multi-fuel issue. As a reflection of this reality, NEEA's new mission statement is "fuel-neutral" to improve the efficiency of energy use, regardless of the energy source. NEEA's new mission closely aligns with the end-user perspective and enables more effective regional efficiency efforts in these markets. However, NEEA is currently funded solely by electric utilities. This single-fuel funding source creates some challenges in accomplishing NEEA's new mission.

For instance, there is currently an inequity in who pays and who benefits. Electric ratepayers are the sole funders but both electric and gas customers benefit with market changes that affect both fuels (e.g. ENERGY STAR windows). Another challenge comes from an inability for NEEA to fully address the efficiency needs of a multi-fuel market. Ultra-high-efficiency gas-fired steam boilers may be very important to some industrial end-customers, but NEEA cannot in good conscience spend electric rate-payer funds to help transform the market for that equipment.

NEEA is proposing to explore the possibility of pursuing funding from non-electric utilities. As a matter of policy NEEA would not use funds from any fuel source to engage in activities that would be seen as encouraging fuel-switching. Rather, NEEA would start from the end-user, fuel-neutral perspective defined in the new mission statement. Any activities funded through other fuel sources would need to support both the mission and goals defined in the strategic plan.

NEEA will develop an action plan to define appropriate steps and stakeholders. Regional gas utilities would likely be consulted to gauge their interest, needs and requirements in specific initiatives related to NEEA's planned work. Electric utility stakeholders would be consulted to ensure that the right balance of funder-equity and end-customer needs are maintained. The Board of Directors will review and monitor non-electric planning and activities.

## **Collaborative Market Planning**

Collaborative planning and coordination will be important to help the region realize the full potential of the 6<sup>th</sup> Northwest Conservation and Electric Power Plan. The 6<sup>th</sup> Plan<sup>13</sup> is likely

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<sup>13</sup> The 6<sup>th</sup> Power Plan is currently scheduled for Draft release in May of 2009 and final adoption on August of 2009. At the time of the drafting of this Business Plan, much of the efficiency supply curve work was largely complete and many of the large efficiency targets have been identified.

to adopt very significant goals for the region for energy efficiency. Much of the new efficiency potential is in areas that will require a coordinated effort between upstream market intervention and local program delivery. Many of these areas are already identified and targeted within this Business Plan. For those that are not, NEEA will work with the region to coordinate and plan for appropriate strategies to address these targets and will re-examine NEEA's portfolio of projects and make adjustments as appropriate.

Market transformation is the end-result of collaboration by all energy efficiency organizations in the region. The ultimate effects and the cost of achieving market transformation will be more successful to the extent that the region coordinates its efforts. Where appropriate, NEEA will serve as regional convener to develop and gain commitment to comprehensive market strategic plans for major energy efficiency opportunities. These plans will include specific market goals and have defined roles for all regional energy efficiency players. They will include emerging technologies opportunities, market transformation initiatives and technical market opportunities.

***Business Planning 2010–2014 Estimated Budget***

Portfolio Management and Cost/Benefit Reporting	\$	807,500
Strategic & Business Planning	\$	412,500
Cost/Benefit Analysis and Technical Support	\$	275,000
Market Planning and Forums	\$	385,000
Staffing and Related Expenses	\$	4,537,500
<b>TOTAL</b>	<b>\$</b>	<b>6,417,500</b>

## 4.4.2 Business Operations

NEEA's business operations unit will comprise the following functional areas; Executive/Board, Finance and Accounting, Legal and Contracts Administration, Human Resources, Information Technology, Facilities, Office Management and Administration and Supplies.

NEEA is committed to efficient and effective business processes, practices, and systems. The growth and new business areas outlined in this Business Plan necessitate for NEEA to develop and utilize more effective and efficient methods of managing its work and reporting on its activities and successes. Effective business operations are key to Business Plan execution and sustainable results. NEEA has historically kept its operating expenses low and plans to continue this trend.

Headquartered in Portland Oregon, NEEA operates programs in Oregon, Washington, Idaho and Montana. NEEA receives its funding from 12 electric utilities, Bonneville Power Administration and the Energy Trust of Oregon. In this Business Plan, NEEA will administer roughly 40 million dollars a year in achieving its goals.

NEEA has approximately 34 full-time employees as of 2009, and is expected to grow to approximately 60 by 2014. Where practicable, NEEA will utilize contract and/or limited term employees to fill its human resource needs. Beyond its official employee count NEEA actively funds and manages a host of implementation, evaluation and market research contractors who work on behalf of NEEA to carry out its goals. Hence many of NEEA's systems and processes have a much larger user base than the organization's 34 full-time employees.

NEEA's business **operating principles** include:

- **In relation to technologies, be neither cutting edge nor obsolete edge** – There is a cost to work with technology that has not yet been proven or become industry standard. What is often overlooked is that there are also opportunity costs in staying with technology that is past its prime. The ideal is to remain balanced between these two so that maximum value can be provided at minimum cost.
- **Operate within the organization's capacity for change** – Over a given time period there is a finite capacity for change within an organization. Exceeding this limit is neither desirable nor sustainable.
- **Follow industry standards and best practices for all business operation functional areas** – Standards and best practices exist for two reasons. First, they provide a means to get an item done. Second, they provide an *industry-proven* means to get an item done.

NEEA's **core values** will be an integral part of all NEEA's operations and mindset, and include:

- **Excellence** – NEEA will be a high-performance organization as evidenced by its focus on and commitment to accountability and continuous improvement, as well as the cost efficiency of its activities. In order to deliver on its promise of excellence,

NEEA will embrace human resources policies and practices that effectively attract and retain high-performing talent.

- **Teamwork/Collaboration** – Effective teamwork and collaboration—both internally and among all stakeholders— is essential to NEEA’s ability to deliver value to the region. To collaborate effectively, NEEA must engage in clear and open communications, and embrace diversity of opinion and perspective.
- **Nimbleness** – Given the dynamic nature of the energy business, NEEA’s future success will likely depend on the ability to respond to unanticipated changes. It will be important for NEEA to have a structure of governance and management that supports the ability to adjust to such changes.
- **Integrity** – Integrity includes honesty—both by the organization and the individual conduct of staff and management—as well as transparency and openness.
- **Supportive work environment** – NEEA is committed to a supportive environment for its employees, including work-life balance, and a culture of respect and kindness.
- **Sustainability** – NEEA is committed to the practice of sustainability in its day-to-day operations and decision-making. The organization is committed to “walking the talk”.

***Business Operations 2010–2014 Estimated Budget***

IT	\$	7,000,000
Finance/Accounting	\$	2,800,000
Contract Mgmt/Legal	\$	2,095,000
Facilities	\$	1,926,000
Adm./Office Mgmt/Supplies	\$	1,750,000
HR/Benefits Administration	\$	1,275,000
Executive / Governance	\$	2,763,000
<b>TOTAL</b>	<b>\$</b>	<b>19,609,000</b>

## 5. Challenges and Paths to Success

### CHALLENGES TO SUCCESS

Tremendous opportunity exists over the next five years and beyond. NEEA management is mindful of challenges as well. In addition to the current economic situation and the volatility in the energy industry, specific risks exist. Organizational growth and operational complexity are two of the most challenging areas facing NEEA over the next five years. Operational complexity is multifaceted and continues to grow as energy efficiency relevance grows in the region. Managing the diverse needs of the region, and coordinating on multiple levels, across multiple functions with multiple stakeholders will require focus.

In addition, NEEA's partners located east of the Cascades shared concerns about regional equity and value, and the need to provide more support for the many smaller, mostly rural, "east-side" utilities and energy efficiency organizations.

Lastly, NEEA recognizes the need to address commercial and industrial energy savings verification, both in the short and long term, associated with the market transformation goal of sustainably changing business practices associated with energy management.

These last two areas were also identified as areas for NEEA to address in a recently completed Independent Evaluation of NEEA's Accomplishments: Retrospective Assessment 2008 (Retrospective) Report.

### PATHS TO SUCCESS – OPERATIONALIZING THE BUSINESS PLAN

To effectively deliver the value outlined in this Business Plan, NEEA must address the challenges it faces. The following section outlines how NEEA intends to address those challenges in its operations.

**Effective growth management.** Growth is required in order to deliver the value outlined in this Business Plan. Growth at this level requires a deliberate and well-executed plan for effectively managing organizational change while being true to NEEA's corporate values.

NEEA's approach to managing growth over the five years will be sequential and in three phases: 1) build on a solid structure, infrastructure foundation, and management processes which allow for effective growth, flexibility and rapid response to regional needs; 2) develop new or re-emphasized business offerings in a prioritized, systematic order; and 3) efficiently and effectively deliver and communicate the value outlined in this Business Plan. This approach will be executed through openness and transparency of operations, with the highest level of integrity, and by supporting a productive work environment for employees.

In the industry's current environment, competition for experienced staff is increasingly fierce. NEEA's ability to continue to attract and retain talent is critical to NEEA achieving its Business Plan. Management will work to mitigate this through a comprehensive talent

management plan including such key elements as professional development opportunities and a supportive work environment.

**Institutionalize key business processes.** In addition to effectively managing growth over the course of this Business Plan, NEEA also will institutionalize key business processes. These processes will ensure that: operations are transparent, flexible, and efficient; decision-making is evidence-based; the voice of the region is integrated; and NEEA invests in a portfolio that delivers optimal return on the region's investment. Following are some of NEEA's key business processes.

**Portfolio Management System.** The need for a formal portfolio management system was identified as a critical issue in NEEA's draft Strategic Plan. This formal system will be integral to NEEA's decision making and will cause NEEA to acquire and view information about all of its initiatives, then sort and prioritize each according to explicit criteria, including strategic value, contribution to Business Plan objectives, regional equity, and resource requirements.

The system will support initiative/program adoption and termination decisions, and include a mechanism for considering trade-offs between continued investments in existing programs and new program opportunities, as well as trade-offs at the corporate level (e.g. between business units). Such a management system will help ensure that NEEA's funders are receiving optimal return on their investment.

This system will be actively managed to help ensure ongoing efficiency and accountability, openly providing information on NEEA initiative and program selection, and provide insight into the portfolio management criteria used in decision making. It is envisioned that NEEA's portfolio will have three levels, each requiring management. The following chart is an example of a potential framework for NEEA.

## Potential Portfolio Criteria Framework

Level	Portfolio	Decision Criteria	Engagement
Level 1	NEEA Corporate Level - between business units	Strategic Plan Goals and Business Plan Objectives Regional Equity Portfolio Cost Effectiveness Diversification	Internal Portfolio Management Council Board of Directors
Level 2	Business Unit Level – within each business unit (i.e. Market Operations, Emerging Technologies, Partner Services)	TBD	Internal Senior Management Planning/Portfolio Expert Committee Emerging Technology Expert Committee Cost Effectiveness Expert Committee
Level 3	Sector Level – within each sector (i.e. Residential, Commercial, Industrial, Agriculture)	TBD	Internal Sector Managers Sector Expert Committees

The full development and management of the Portfolio Management System will be done in consultation with NEEA's partners, forums and committees. Examples of potential criteria at the corporate level include:

1. *Strategic Plan Goals and Business Plan Objectives* – Ensure all goals and objectives outlined in the Business Plan are met. If any objective is not being met over time, that will be considered a priority area for investment. A measurement of relative portion/weight will be developed between the goals and objectives to aid decision making during 2010-2014.
2. *Regional Equity* – NEEA will balance its portfolio to deliver benefits fairly and equitably across the region; recognizing the needs of stakeholders in rural and urban settings both east and west of the Cascades, as well as each of the four states. Initial metrics used to assess this balance include: the number of states

touched; the number of utilities and system benefits administrators touched directly; and a measure of rural touch.

3. *Portfolio Cost Effectiveness* – Ensure the portfolio’s total resource cost (TRC) remains at or below 3.5 cents/kWH, and that a percentage (target 20 – 30%) of the overall budget is for activities with “non-countable” direct energy savings, either in the short or long term.
4. *Diversification* – NEEA will balance its portfolio to ensure a diversification of investment to mitigate risk. Metrics will be further established around short vs. long term benefit, direct versus non-direct energy savings, and likelihood of success.

The level one corporate decision criteria above were used in development of this Business Plan and will be further refined to balance NEEA’s portfolio. In addition, the second and third levels of criteria will be developed and utilized with advice and consultation from NEEA’s Expert Committees. Like any good system of checks and balances, NEEA’s portfolio management system will help NEEA remain nimble and flexible during wholesale or incremental changes in the economic/environmental landscape.

**Engagement with regional stakeholders.** NEEA is committed to collaboration with regional partners. NEEA will engage with regional stakeholders to help ensure the diverse needs of the region are appropriately reflected within NEEA operations. NEEA is committed to identify areas of coordination to reduce any potential for duplication. Supporting this effort will require focused resources and systems to ensure effectiveness.

A network of expert/advisory committees will provide counsel on NEEA operations. Four Expert Committees are currently in place, and will continue through the course of this plan. There is a committee for each of the three sectors, as well as a Cost Effectiveness and aMW Savings Committee.

The purpose of the Sector Expert Committees is to provide NEEA with broad-based advice, experience and feedback. This feedback is used to influence NEEA’s work toward achievement of the organization’s strategic goals, priorities and objectives.

The purpose of the Cost Effectiveness and aMW Savings Committee is to help ensure the reliable reporting of NEEA cost effectiveness and aMW savings information so that the information for use by utilities and public benefits administrators is appropriate. The Committee also reviews and provides recommendations to management regarding the ongoing development and implementation of cost and savings measurement and estimation methods, including evaluation work. This Committee has representation from utilities, Bonneville Power Administration, Energy Trust of Oregon, The Power and Conservation Council and State Public Utility Commission staff.

Along with these existing committees, NEEA envisions at least three additional committees. First, an Executive Director Advisory Committee will be established to help ensure the broader regional voice from indirect funders is informing NEEA on

an ongoing basis. The second Committee envisioned is a Planning/Portfolio Expert Committee for helping advise and providing counsel to NEEA around its market planning, market operations, and to have a look at NEEA across the three sectors. Finally, an Emerging Technologies committee is also anticipated.

**Energy savings and cost effectiveness analysis.** The energy savings estimates presented in this Business Plan are management targets. They do not represent detailed supply curves similar to those the Regional Technical Forum / Northwest Power and Conservation Council provide.

Over the course of this Business Plan, these forecasts as well as the program(s) cost effectiveness estimates will be reviewed and updated as part of the annual Alliance Cost Effectiveness (ACE) model review. The Cost Effectiveness and aMW Savings Expert Committee is part of this annual review. The ACE models will also be part of the basis of the data for the portfolio management system and that if forecasts show that targets are not likely to be met, then the portfolio process will take appropriate action.

**Energy Savings Tracking and Reporting.** NEEA will establish a service territory level energy savings tracking and reporting system. NEEA is committed to working with each funder to report energy savings achieved in their service area in a format and time frame that meets their needs. The tracked energy savings will be reviewed with the Cost Effectiveness and aMW Savings Expert Committee on an annual basis. For Washington utilities that fall under I-937 requirements, NEEA will provide reporting of each utility's share of savings for both its direct contribution to NEEA as well as for their indirect contributions paid through BPA rates.

**Evaluation and Adaptive Management.** NEEA is committed to conducting ongoing evaluation activities that provide critical information for decisions on project planning & design, adoption, adaptive management and exit strategies. Ongoing evaluation (as opposed to ex-post evaluation) helps to ensure NEEA's transparency, responsiveness and timely decision making. NEEA will publish annual market progress evaluation updates for each market transformation initiative in its portfolio. These reports provide stakeholders with an objective third-party assessment of each initiative's progress against established market progress indicators and outcomes.

Over the next five years, NEEA will place particular emphasis on developing a robust methodology for estimating savings associated with business practice change in the commercial and industrial sectors. The evaluation team will communicate regularly with the Cost-Effectiveness and aMW Expert Committee, and with other stakeholders to ensure that proposed saving estimation methods benefit from regional input, are well understood and are agreed upon. Evaluation of prior NEEA initiatives also will be conducted regularly to assess post-market intervention baseline and market adoption and allow the region to substantiate the long-term savings associated with those initiatives.

## 6. Appendixes

### 6.1 NEEA's Value

#### **OVERVIEW OF NEEA**

Since its inception in 1997, NEEA has consistently evolved to meet the needs of its stakeholders. NEEA is known as a pioneer in market transformation – driving energy efficiency at a regional level. In NEEA's recent independent [Retrospective Report](#) conducted by Northwest Economic Research, NEEA rated high in employee satisfaction, responsiveness and transparency. Along with the rest of the energy efficiency industry, NEEA is responding to a rapidly changing landscape. In addition to adjusting program operations to work more closely in collaboration with other energy efficiency programs, NEEA recently recruited Executive Director Claire Fulenwider to lead the organization. In addition, NEEA's funders recently simplified its governance structure; moving from a 27-member Board of Directors to 14 members and re-focusing Board work on strategic policy.

#### **NEEA LEADERSHIP**

NEEA's Board is comprised of key members of the Northwest energy efficiency community. The NEEA Board of Directors is an esteemed collection of senior, respected members of the Northwest's energy industry known for their national and regional, public and private sector professional experience. The Board represents the public power utilities of the Northwest, Investor-Owned Utilities, the states of Washington, Oregon, Idaho and Montana, public representation, Bonneville Power Administration and The Energy Trust of Oregon. This Board is well prepared to guide NEEA through the growth and transition required to facilitate market transformation.

NEEA's Executive Director, Claire Fulenwider comes to NEEA with more than thirty years experience in the energy industry and has a passion for energy efficiency, conservation and the environment. Her background in organizational development, energy efficiency practice, program design and implementation, strategic planning, evaluation and business development is well suited to NEEA's current challenges. Her experience leading organizations of diverse sizes and interests will serve NEEA well as it strives to meet the needs of the region over the next five years.

Fulenwider leads a senior management team with extensive experience in the energy field as well as in private sector markets. NEEA leadership and senior staff have diverse and deep backgrounds in marketing, research, architecture, process and project engineering, and public policy.

## **NEEA'S UNIQUE CHARACTERISTICS**

Recognizing that many organizations are working toward a common goal of improving energy efficiency in the region, NEEA seeks to maximize return on investment to its funders by focusing on areas that build on its core competencies and leverage its unique strengths to complement local energy efficiency program efforts. The following distinct characteristics – combined with NEEA's core competencies–position NEEA well to serve the region in the areas outlined in this Business Plan.

### ***Aggregator of market resources***

NEEA is the only alliance of both public and private electric utilities that represents the entire four-state region to national and global market partners. The aggregation of market resources provides the region with greater potential to influence market actors for the benefit of its regional stakeholders. NEEA adds 'clout' for the region's utilities.

### ***Impartial promoter of energy efficiency***

NEEA's sole focus will continue to be on energy efficiency. Because it has no product or service to sell or promote, it presents a credible face to the market.

### ***Mechanism for cost-effective long-term energy efficiency initiatives***

NEEA provides the region with a mechanism through which it can undertake and fund riskier long-term energy efficiency initiatives than would otherwise be possible without a regional energy efficiency organization. By pooling funds into a portfolio of long-term initiatives, utilities can leverage their dollars and spread risk while investing in tomorrow's successful energy efficiency initiatives. NEEA can work to transform energy markets in ways that individual utilities cannot.

## **NEEA'S CORE COMPETENCIES**

Combined with its unique characteristics, NEEA's core competencies will help the region achieve a sustained adoption of energy-efficient technologies and practices, and provide the foundation for NEEA to achieve the goals and objectives presented in this plan:

### ***Market Assessment to Identify Energy Efficiency Opportunities***

NEEA has more than a decade of experience designing and managing a variety of market assessments that have enabled it and the region at large to identify the most promising opportunities for energy efficiency. Examples include large regional studies such as the Commercial Building Stock Assessment, the Residential New Construction Characteristics and Practices Survey, and the Single Family Residential Existing Stock Assessment. These studies were influential in helping NEEA identify opportunities in these markets, helped support the Northwest Power and Conservation Council develop its critical Power Plans, and assisted several regional utilities with their integrated resource planning (IRP).

### ***Design and Execution of Innovative Market Strategies***

Over the last twelve years of operation, NEEA has accrued significant experience and expertise in developing and executing innovative market strategies that increase market

adoption of energy efficiency technologies and practices at a low cost. One example of where NEEA has successfully designed and pursued strategies to overcome barriers to market adoption is in its ENERGY STAR Homes Northwest program. NEEA designed and collaborated on the development of an entire market infrastructure, including negotiating a Northwest ENERGY STAR specification that was appropriate given the region's more stringent codes versus the rest of the country.

### ***Leveraging Market Relationships***

Since the markets that NEEA strives to change are national markets, NEEA has developed strategic relationships that allow influence at the national level. NEEA's relationships include the following: national manufacturers and retailers; government organizations such as the U.S. Department of Energy and Environmental Protection Agency; national efficiency organizations; and a broad array of industry and professional organizations such as American Society of Heating, Refrigerating and Air-Conditioning Engineers, Building Owners and Managers Association, Hydraulic Institute, and the Northwest Food Processors Association.

### ***Codes and Standards Expertise and Relationships***

NEEA holds competencies in state energy code development and strategy formulation, and has successfully engaged in the national standards setting process throughout the past decade. NEEA has pursued this work as an integral part of the overall market transformation process.

### ***Regional Coordination and Communication***

Since its inception, NEEA has always had to adjust to a changing landscape. Over the last several years NEEA has been redesigning program operations to work more closely in collaboration with other efficiency programs; to complement—not compete. Over this period, NEEA's capability to coordinate regional activities has grown, as utilities have ramped up local energy efficiency programs, and NEEA has learned from its experiences. NEEA has demonstrated this competency on a variety of projects including: the "Double Your Savings" program for ultra-high-efficiency clothes washers and the Green Motors program.

Finally, NEEA is also unique in being a regional energy efficiency organization funded solely through voluntary contributions of regional utilities and public benefits organizations. Utilities, Bonneville Power Administration and The Energy Trust of Oregon have realized that together they can achieve more with a regional organization than they can individually.

## 6.2 ENERGY SAVINGS ESTIMATES AND COST EFFECTIVENESS

### *Energy Savings Metrics*

This Business Plan includes energy savings estimates using two different metrics<sup>14</sup>:

1. **Total Regional Savings** – These are savings estimated from a measurement of total market share for a given efficiency technology. This metric does not make any judgments as to attribution for the observed market share; i.e., it does not attempt to assign credit for the market adoption of the efficiency measures to NEEA or local utility programs or consumer behavior. This metric is most directly linked to power supply requirements for utilities as it represents the actual efficiency of the end-use load. It is also the more appropriate metric for a regional, collaborative effort to change the market.
2. **Net Market Effects Savings** – These savings are derived by calculation and assignment of attribution. To arrive at this metric, total regional savings are divided into three components of attribution: a component associated with an assumed market response if there had been no NEEA or utility intervention otherwise known as “baseline” energy savings, a component associated with local utility program savings claimed or counted from local utility program efforts; and lastly a component calculated by deducting the first two components from total regional savings that are the assumed “net market effects” resulting from NEEA and utility program interventions in the market. This is the metric NEEA has historically used for measuring and reporting savings as a mechanism to avoid double counting of savings in reporting. This is useful for regulatory recognition but presents a potential conflict with goals for collaboration as it places priority on maximizing savings where utilities or other entities are not engaged.

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<sup>14</sup> Both metrics are stated in units of average megawatts or the equivalent output of a power plant producing one megawatt of power for 8,760 hours for one year

## 6.3 COST-EFFECTIVENESS ESTIMATES

### *Cost-Effectiveness Metrics*

For this Business Plan, NEEA has estimated cost-effectiveness using two different metrics:

- **Total Resource Cost** – This metric is calculated using the standard definition adopted by most of the regulatory commissions in the region: sum of all societal costs net of the sum of all societal quantifiable benefits divided by total regional energy savings and levelized over the typical life of the measure.
- **NEEA only** – This metric is calculated assuming what is more traditionally viewed as a “utility cost test”. It is a NEEA-centric viewpoint that is calculated by taking the sum of NEEA costs divided by net market effects energy savings and levelized using the appropriate measure life.

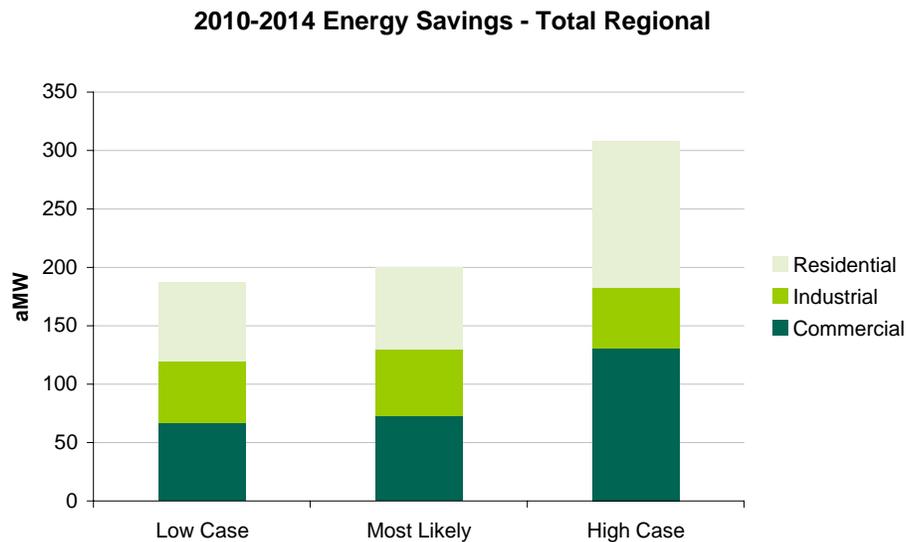
In both cases, NEEA uses a modeling process that is based on and consistent with the Northwest Power and Conservation Council’s cost-effectiveness protocols.

### *Energy Savings, Cost Effectiveness and Risk*

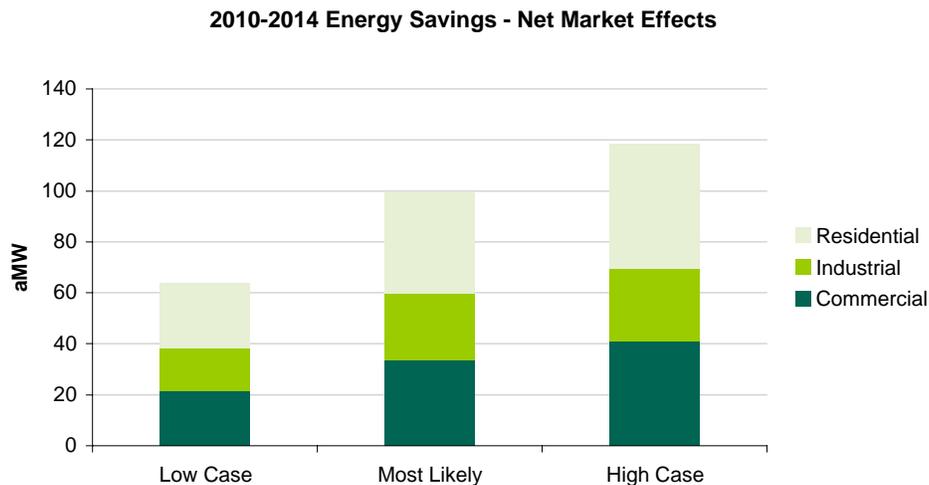
The energy savings and cost-effectiveness throughout this Business Plan represent a “most-likely” scenario based on the best information available at the time of writing. In order to test the robustness of these values, NEEA also examined a “high” scenario where the assumptions in the “most likely” scenario were pushed to achieve a “less likely” but more optimistic energy savings scenario. A third “low-case” scenario was developed to represent a very conservative, high-probability scenario; i.e., what could the Business Plan be expected to deliver even under the very unlikely scenario that almost all of the “most likely” scenario key assumptions fail to materialize. For the “high case” scenario, these assumptions could be assumed to be associated with a 25% probability of occurrence; i.e. there is a one in four chance that the energy savings will achieve a higher level than the “most likely” scenario. The “low case” is assumed to represent a 75% probability of occurrence; i.e, a 75% chance that savings will at least hit these levels.

Figure A-1 below depicts the Total Regional Savings for 2010-2014 for each of the three scenarios. Figure A-2 depicts the Net Market Effects energy savings for the same period.

**Figure A-1. Total Regional Energy Savings 2010-2014**



**Figure A-2. Net Market Effects Energy Savings 2010-2014**



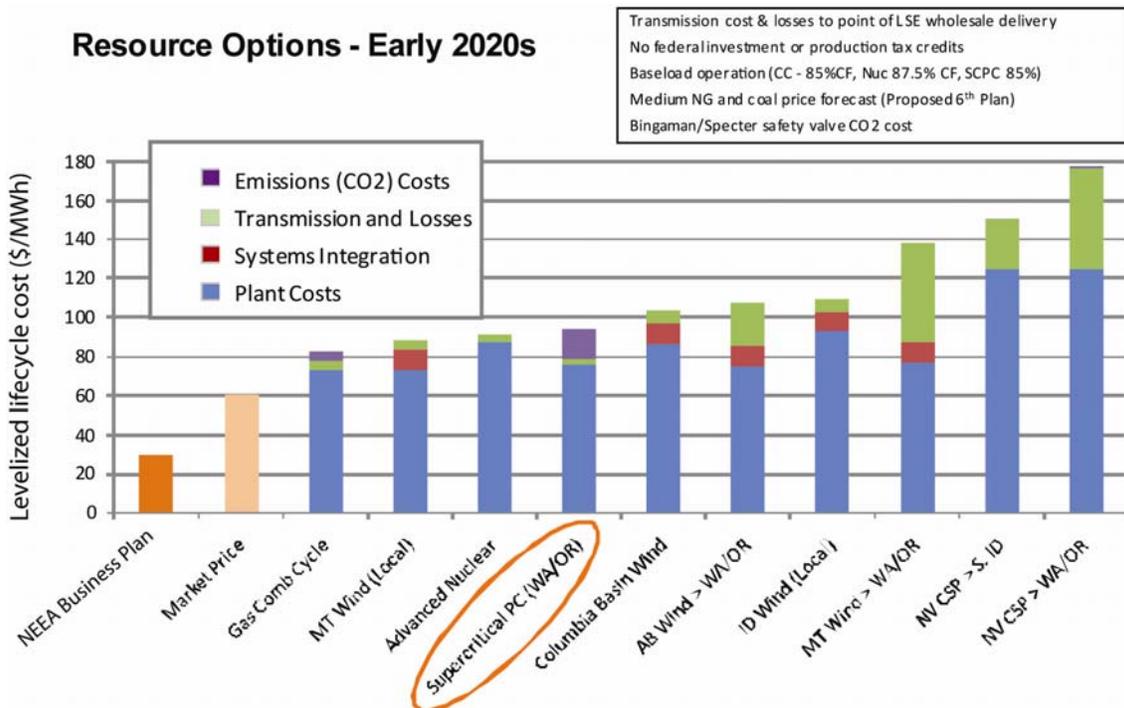
From a cost-effectiveness perspective, the Total Resource Cost (TRC) estimates for the portfolio do not change substantially since the majority of the costs are driven by end-customer costs that tend to scale proportionately. However, the NEEA-only cost-effectiveness changes fairly dramatically; lowering to about 2 cents/kWh under the “high” case but increasing to over 4 cents/kWh under the “low case”.

***NEEA energy efficiency resource cost compared to other resource choices.***

Figure A-1 below compares the total resource cost (TRC) for the energy savings acquired in markets targeted by NEEA initiatives. As illustrated in Table 1, the energy efficiency resource

in these markets is anticipated to be less than half the cost of the nearest likely alternative: a market purchase of firm power. It is projected to be one third or less of the cost of any likely generating resource options. Even if the projected costs of NEEA's efforts are off by a factor of two, the efficiency resource targeted by NEEA's initiatives would still be a bargain for the region.

**Figure A-1. Cost of New Resource Options for the Northwest**



Source: Jeff King, Northwest Power and Conservation Council: Sixth Northwest Conservation & Electric Power Plan, Rankine (steam) Cycle Coal-fired Power Plant Resource Assessment, Dec. 9, 2008

## 6.4 BUDGET DETAIL

### *2010–2014 Budgets by Sector/Business Unit*

The following financial information includes 5 budget estimates for 2010–2014. These budget estimates may change due to NEEA's Portfolio Management System. The Portfolio Management process provides a formal mechanism for consideration of tradeoffs between continued investment in existing projects and new project opportunities, as well as trade-offs at the corporate level. The portfolio management process will evaluate resource allocation across the portfolio with regards decisions to accelerate investment, to de-prioritize certain areas, to divest in certain areas and to develop new strategies areas of focus for the business.

Table A-1 below shows the detailed budgets by sector and major activity:

**Table A-1. Estimated 2010-2014 Detailed Budgets.**

<b>Residential Sector</b>	
New Construction - Energy Star and Market Support	\$ 5,000,000
New Construction - Green Building Partnerships	\$ 3,000,000
New Construction - Emerging Technologies	\$ 3,500,000
New Construction - Training and Education	\$ 500,000
Retail / Home Products - Upstream Market Support (mftr support/product procurement)	\$ 1,250,000
Retail / Home Products - Market Support (retailer support)	\$ 6,600,000
Retail / Home Products - Market Support (training)	\$ 1,250,000
Retail / Home Products - Emerging Tech (product strategy/roadmap & Top Ten)	\$ 500,000
Retail / Home Products - Upstream buy down	\$ 2,500,000
Ductless Heat Pumps/Other Product Opportunities - Operations (mftr support/product procurement)	\$ 2,250,000
Ductless Heat Pumps/Other Product Opportunities - Operations (training, contractor/distributor support)	\$ 6,000,000
Ductless Heat Pumps/Other Product Opportunities - Utility support	\$ 1,000,000
Ductless Heat Pumps/Other Product Opportunities - Emerging Tech (cold climate, more EE products, new manufacturers)	\$ 250,000
Regional Coordination	\$ 2,250,000
Evaluation & Market Research	\$ 3,600,000
Performance Mgmt, Tracking & Reporting	\$ 800,000
Staffing and Related Expenses	\$ 3,000,000
<b>TOTAL</b>	<b>\$ 43,250,000</b>

<b>Commercial Sector</b>	
Hospitals/Healthcare	\$ 3,000,000
Office Real Estate	\$ 3,750,000
Design & Construction - Business Advisory	\$ 1,500,000
Design & Construction - Technical Advisory	\$ 4,500,000
Design & Construction - Product/Service Development	\$ 2,000,000
Design & Construction - Education/Training	\$ 3,500,000
Design & Construction – Marketing	\$ 1,250,000
Building Operations - Business Advisory	\$ 1,250,000
Building Operations - Technical Advisory	\$ 4,500,000
Building Operations - Product/Service Development	\$ 1,250,000
Building Operations - Education/Training	\$ 2,500,000
Building Operations – Marketing	\$ 1,250,000
Regional Coordination	\$ 2,250,000
Evaluation & Market Research	\$ 3,200,000
Performance Mgmt, Tracking & Reporting	\$ 800,000
Staffing and Related Expenses	\$ 6,500,000
<b>TOTAL</b>	<b>\$ 43,000,000</b>

<b>Industrial Sector</b>	
Food Processing - MT Initiative	\$ 3,930,000
Industry Association Initiative - MT Initiative	\$ 3,600,000
New Industry in 2011 (i.e. Wood Products) - MT Initiative**	\$ 3,020,000
New Industry in 2013 (i.e., Waste Water) – MT Initiative**	\$ 1,000,000
Energy Management Development	\$ 2,500,000
Energy Management Implementation	\$ 5,979,000
Energy Management - Train the Trainer	\$ 1,500,000
Regional Training	\$ 2,000,000
Regional Coordination	\$ 1,200,000
Evaluation & Market Research	\$ 2,880,000
Performance Mgmt, Tracking & Reporting	\$ 800,000
Staffing and Related Expenses	\$ 5,750,000
<b>TOTAL</b>	<b>\$ 34,159,000</b>

\*\* Note: Selection of target market to be determined by market transformation potential and regional equity.

<b>Codes and Standards</b>	
Codes: Support Adoption	\$ 700,000
Codes: Increase Compliance	\$ 3,400,000
Codes: Set Agendas and Standards	\$ 400,000
Standards: Support Adoption	\$ 425,000
Standards: Increase Compliance	\$ 250,000
Voluntary: Support Creation	\$ 425,000
Evaluation & Market Research	\$ 750,000
Performance Mgmt, Tracking & Reporting	\$ 250,000
Staffing and Related Expenses	\$ 800,000
<b>TOTAL</b>	<b>\$ 7,400,000</b>

<b>Emerging Technology</b>	
Discovery and Assessment - Secondary Market Research	\$ 250,000
Discovery and Assessment - Regional/national Partnerships (PIER, USDOE)	\$ 250,000
Discovery and Assessment - Unsolicited Proposals	\$ 935,000
Confirmation: Field Demonstrations - 3-4 demonstration of ET at individual sites / yr	\$ 3,550,000
Confirmation: Laboratory Testing - Two lab test projects / yr	\$ 750,000
Confirmation: Primary Market Research - Establish 4 projects per yr	\$ 875,000
Pilot Projects/Market Tests - Residential Heat Pump Water Heater Pilot Project*1	\$ 3,750,000
Pilot Projects/Market Tests - High-efficiency Servers/datacenters Pilot Project*1	\$ 2,750,000
Pilot Projects/Market Tests - Industrial Pump System Optimization Services Mrkt Test*1	\$ 1,750,000
Pilot Projects/Market Tests - SSL Street and Area Lighting Market Test*1	\$ 1,000,000
EEO Information Services	\$ 250,000
Evaluation	\$ 350,000
Staffing and Related Expenses	\$ 3,316,000
<b>TOTAL</b>	<b>\$ 19,776,000</b>

<b>Partner Services and Communications</b>	
Information Services	\$ 1,250,000
Conferences/Forums	\$ 1,000,000
Training Events–Program Staff	\$ 1,000,000
Communications	\$ 3,525,000
Staffing and Related Expenses	\$ 6,326,000
<b>TOTAL</b>	<b>\$ 13,101,000</b>

<b>Regional Evaluation, Market Research and Assessments</b>	
Building Stock Characteristics (BCS) Studies–Residential	\$ 2,000,000
BCS Industrial	\$ 1,250,000
BCS-Commercial	\$ 3,000,000
Clearinghouse Development/Mgmt	\$ 700,000
Long-Term Monitoring & Tracking	\$ 1,000,000
Market Research to Support Promotion of Energy Efficiency	\$ 500,000
Staffing and Related Expenses	\$ 1,176,000
<b>TOTAL</b>	<b>\$ 9,626,000</b>

<b>Corporate Planning</b>	
Portfolio Management and Cost/Benefit Reporting	\$ 807,500
Strategic & Business Planning	\$ 412,500
Cost/Benefit Analysis and Technical Support	\$ 275,000
Market Planning and Forums	\$ 385,000
Staffing and Related Expenses	\$ 4,537,500
<b>TOTAL</b>	<b>\$ 6,417,500</b>

<b>Business Operations*</b>	
IT	\$ 7,000,000
Finance/Accounting	\$ 2,800,000
Contract Mgmt/Legal	\$ 2,095,000
Facilities	\$ 1,926,000
Adm./Office Mgmt/Supplies	\$ 1,750,000
HR/Benefits Administration	\$ 1,275,000
Executive / Governance	\$ 2,763,000
<b>TOTAL</b>	<b>\$ 19,609,000</b>

*\*Note: Staffing and related expenses are allocated in each functional area*

## 6.5 GOALS, OBJECTIVES AND METRICS DETAIL

### *Overarching Corporate Objectives and Metrics*

Objective	Associated Metric
<p>By 2014 NEEA, regional utilities, and market partners collaborate to change Northwest markets resulting in 200 "total average regional" aMW (500 "total" aMW by 2019)</p> <ul style="list-style-type: none"> <li>Residential: 72 aMWs of total regional savings (206 total regional aMWs by 2019)</li> <li>Commercial: 70 aMWs of total regional savings (182 total regional aMWs by 2019)</li> <li>Industrial/Agricultural: 58 aMWs of total regional savings (140 total regional aMWs by 2019)</li> </ul>	<p>"Total regional" energy savings in aMW – measured in service territory for direct funders</p>
<p>At least 100 aMW of those energy savings will be attributed to net market effects above and beyond savings that NEEA funders can claim from their local programs</p> <ul style="list-style-type: none"> <li>Residential: At least 41 and 92 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively.</li> <li>Commercial: At least 32 and 56 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively</li> <li>Industrial/Agricultural: At least 27 and 58 aMW of those energy savings will be net market effects over the 5- and 10-year period, respectively</li> </ul>	<p>"Net" energy savings in aMW</p>
<p>NEEA represents the region's interests by participating on boards and on other influential committees of key regional and national organizations (i.e. the Consortium for Energy Efficiency, the American Council for an Energy Efficient Economy, New Buildings Institute) that can enhance the regions market leverage</p>	<p>Board seats, committee memberships, papers, presentations, other participation</p>
<p>NEEA's funders identify market transformation through NEEA as part of their energy efficiency portfolio</p>	<p>Question on annual funder survey</p>
<p>All NEEA funders count NEEA-reported net market effects toward their energy efficiency accomplishments</p>	<p>Savings from NEEA appears on reports</p>

Develop and implement a portfolio management system to ensure NEEA's portfolio is optimized	System is developed, transparent, and consistently applied to make portfolio decisions
Provide ongoing evaluation/market research for all NEEA initiatives in a timely manner that facilitates decision-making and adaptive management	At least one evaluation report per year for all currently funded initiative; interim reports throughout the year
Conduct evaluation on prior NEEA initiatives to assess post intervention market baseline and adoption, and allow the region to substantiate the long-term savings associated with those initiatives	Annual Long-term Monitoring & Tracking Report
NEEA stakeholders and the energy efficiency community recognize it as a trusted source of information and expertise on energy efficiency matters	Stakeholder survey metric; report/information requests

***Objectives and Metrics of the Six Strategic Goals***

**Goal #1: Increase Market Adoption**

<b>Goal 1 Objectives</b>	<b>Associated Metric</b>
Make energy efficiency an integral part of business decision making in targeted commercial markets.	Reported practices; energy efficiency goals
Increase the efficiency of new commercial buildings in support of the 2030 challenge.	As-designed/built/occupied energy consumption (for a statistically valid sample of buildings) vs. consumption for like building types from new construction baseline. Pre- vs. post-intervention efficiency of designs.
Increase the efficiency of existing commercial building operations by 10-30%.	Pre/post-energy consumption data for a representative sample of buildings in target markets that adopt enhanced O&M practices
Food Processing: provide tools & resources that enable the industry to reach its energy management goal of 25% reduction in 10 years.	Food processing industry acknowledges NEEA-sponsored tools and resources as key to their success.
Pulp and Paper: influence a key regional/national industry association (Technical Association of the Pulp & Paper Industry, American Forest & Paper Association, etc) to adopt a NW energy intensity reduction goal.	Pulp and Paper industry adopts goal similar to the food processing industry.

Industry groups representing at least one-third of Northwest industrial load adopt a goal of energy intensity reduction	% of load represented by industries that adopt goal
Prove the concept of energy management as a management approach that delivers substantial energy savings	Substantial reduction in energy intensity as a result of "energy management" practices validated across industries
16% of Northwest industrial firms adopt a strategic energy management policy	% of firms that adopt strategic energy management policy Or % of firms that sign up for ISO 50001
In response to policy mandates, support increases in stringency and compliance of energy codes in each of the 4 Northwest states.	Stringency measured using engineering models; compliance measured via new construction surveys
NEEA supports the adoption of more stringent efficiency standards for key strategic markets	Documented activity for each standard
Achieve 15% market penetration of ductless heat pumps among identified target households	Number of DHPs installed divided by target population.
Identify and pursue the highest priority consumer products that present greatest potential for Market Transformation and energy savings	Market share of targeted products
Increase the efficiency of new residential construction	Determine reductions in energy use through billing analysis or other analytical methods.
Achieve a 5% market share for a reliable heat pump water heater with performance of at least ENERGY STAR standards for HPHW (50% savings over standard HWH).	Market share of water heater sales

**Goal #2: Help NW utilities and other energy efficiency organizations achieve their energy efficiency goals**

Goal 2 Objectives	Associated Metric
Communicate with energy efficiency partner organizations	Selected metrics from stakeholder

on a regular basis to understand their needs and priorities, discuss NEEA partnership and identify areas for improvement/added value, and maintain a stakeholder focused organization.	survey (e.g. stakeholder satisfaction)
Provide information services to NEEA partners to support energy efficiency programs. Services will include best practices, emerging technologies, market information, and “syndicated content”/technical services that can be used to add value to customers.	Information provided via web site, events, other information tools; partner ratings (e.g. satisfaction, usefulness) of these services
Host two annual regional conferences/forums on topics of interest to regional partners (e.g. best practices, emerging technologies) that allow them to exchange information with colleagues and industry experts.	Events. Event evaluation.
Coordinate two training events per year for energy efficiency program staff on topics of interest (e.g. customer segmentation and program marketing)	Events. Event evaluation.
Deliver access to and influence with upstream mass market actors and channels.	Upstream market actors change market behavior (e.g., manufacturing, shipments, distribution, pricing ) as a result of NEEA influence on behalf of Northwest customers
Validate replicable energy savings associated with sustained practice of strategic energy management in Commercial and Industrial Sectors	NEEA aMW and Cost-effectiveness Expert Committee has reviewed and accepted savings validation methodology
Two-thirds of northwest energy efficiency organizations (utilities, Energy Trust Oregon, Bonneville, state and local programs) with significant industrial and commercial loads, respectively, integrate strategic energy management into their offerings.	% of partners with significant industrial/commercial loads do this.
Develop at least three industrial and agricultural regional technical solutions that utilities can provide their customers	These technical solutions are available

**Goal #3: Build regional market knowledge and capability through education and training**

Goal 3 Objectives	Associated Metric
Advance architect, design engineer and contractor capabilities to employ integrated design approaches, tools and resources that result in buildings that meet 2030 Challenge performance levels (50% better than current practice).	Pre/post as-designed building performance (based on engineering models) for recipients of NEEA-sponsored training/technical assistance
Advance building service provider and operator capabilities to deliver building operating performance levels that are 10%--30% better than current practice.	Pre/post comparison of energy consumption index of buildings operated by service providers/operators who are recipients of NEEA-sponsored training/technical assistance.
Develop and deliver a suite of standardized energy management training curricula for trade allies and building/plant operators in Commercial and Industrial sectors (C&I) that result in predictable participant behavior/business practice change that can be tied to measurable and replicable energy savings.	The curricula. Behavior change measures from attendees. Validated savings associated with training.
Building officials representing 90% of the Northwest population participate in code education/training. Building trade allies representing 75% of the population are aware of/know how to access training/technical assistance resources	Training participation; awareness of training/technical assistance resources among target population
Advance the knowledge/practice of energy efficiency as a core part of professional development (e.g., training and education; continuing education for architects; engineers; building operators; refrigeration engineers) in partnership with others, including trade associations, utilities/public benefits administrators.	EE added to core curricula of targeted trade allies.
Provide training/technical support to management consulting companies (e.g., ISO and Lean Consultants) so they are able to deliver energy management services	2–3 companies beyond NEEA contractors can implement energy management with their clients; support is available across the region
Train and educate the residential new construction market: builders, verifiers, real estate agents; space heating market: distributors, contractors; and retailers.	Train 500 additional builders, 500 appraisers, and 2500 real estate agents; 100% of retailers NEEA partners with incorporate key messaging and sales practices; trade allies understanding and promotion of

	high performance equipment and materials
Support development of standards related to energy management including the completion of ISO 50001.	Standard adopted

**Goal #4: Increase regional market availability of emerging technologies**

Goal 4 Objectives	Associated Metric
Identify and pursue the highest priority energy efficient emerging technology opportunities and manage a portfolio estimated to deliver 300 aMW by 2030.	Projected aMW of emerging technology projects in 2030, per ACE models and evaluations
Partner with California on at least one research collaborative that leverages NEEA funding	Project partnership; evidence of market leverage
Conduct and disseminate at least three actionable market research projects annually that influence industry directly or indirectly through NEEA activities.	Market research reports. Reports/findings requested/presented; evidence of findings acted upon.
Design practical pathways to achieve interim milestones for the 2030 Challenge for Net Zero Energy/Carbon Buildings:  a. Design prototypes for at least 2 targeted markets that achieve energy savings of at least 50% over current practice and are the basis for real projects completed or under construction by 2014 b. Develop simplified approaches for design-build markets that achieve energy savings of at least 50% over current practice and are the basis for at least 5 real projects completed or under construction by 2014.	a. Prototypes designed; buildings completed or under construction;  b. Simplified approaches developed; 5 buildings completed or under construction deploying these approaches.
Identify and demonstrate at least two next -generation energy efficient products and services for information technologies including office equipment, servers and datacenters;	Number of energy-efficient Information technology (IT) products or services ready for full commercialization.
At least two industrial process innovations are developed, demonstrated and ready for market adoption in partnership with targeted industries consistent with their industry-wide goals.	Number of process innovations in targeted industrial markets

**Goal #5: Support the region’s efforts to promote energy efficiency**

Goal 5 Objectives	Associated Metric
Key environmental and sustainability organizations and key market influencers (e.g. U.S. Green Building Council, Building Owners and Managers Association, Northwest Food Processors Association, Technical Association of the Pulp and Paper Industry) that have an impact in the Northwest integrate energy efficiency into their efforts.	Targeted organizations integrate EE into their key messages and practices.
Ensure key EE messages and regional accomplishments through NEEA are included as part of news coverage in targeted publications	Coverage in targeted publications
Identify needs, coordinate, conduct and disseminate actionable findings from regional marketing research that supports the region’s efforts to promote energy efficiency.	Market research findings are disseminated

**Goal #6: Facilitate regional energy efficiency planning and implementation**

Goal 6 Objectives	Associated Metric
Develop and gain regional commitment to comprehensive market strategic plans for at least two of NEEA’s major initiatives; these plans have shared goals and defined roles for all regional energy efficiency players (Heat Pump Water Heaters and the residential water heating market).	NEEA stakeholders view NEEA as working collaboratively in partnership with them, per annual stakeholder survey
Plan, coordinate, and deliver region building characteristics studies for the Residential, Commercial and Industrial sectors on an ongoing basis – with timing that aligns with regional planning needs. Make methodologies, instruments and data available and easily accessible to the region in an online clearinghouse.	Completion of studies. Establishment & use measures for clearinghouse.
Facilitate the development of a roadmap for reaching the NWPC’s 6 <sup>th</sup> Power Plan’s Industrial potential.	Agreement on a regional roadmap

## 6.6 2010-2014 BUSINESS PLAN AND THE 6<sup>TH</sup> POWER PLAN

**Context.** As of the writing of this document, the Northwest Power and Conservation Council is currently in the final stages of drafting the 6th Northwest Power Plan. The first draft of the Plan is scheduled for release in May of 2009 with a projected final adoption in August of 2009.

Although the numbers are still in review, Council staff are projecting that the 6th Plan will identify a very significant conservation resource potential; perhaps as much as 5,000 aMW to be captured over the next 20 years. This very large target presents real challenges to the region and to NEEA's 2010-2014 Business Plan.

**Overlay with the 2010-2014 Business Plan.** Unfortunately, the final outcome from the 6<sup>th</sup> Plan process will not be known before NEEA's 2010-2014 Business Plan is anticipated to be adopted by the Board in April of 2009.

In order to better understand the challenge presented by the 6th Plan and its interaction with the 2010-2014 Business Plan, a preliminary analysis of the draft 6<sup>th</sup> plan documents was conducted and mapped against the markets supported in the 2010-2014 Business Plan.

This analysis consisted of the following steps:

1. Identify 6th Plan efficiency measures and technically-achievable energy savings potential with cost-effectiveness up to 100 mills/kWh .
2. Map these measures against 2010-2014 Business Plan market activities.
3. Aggregate savings where the Business Plan provided direct support to the market that delivers the efficiency measure.
4. Identify key gaps between the 6<sup>th</sup> plan and the 2010-2014 Business Plan.

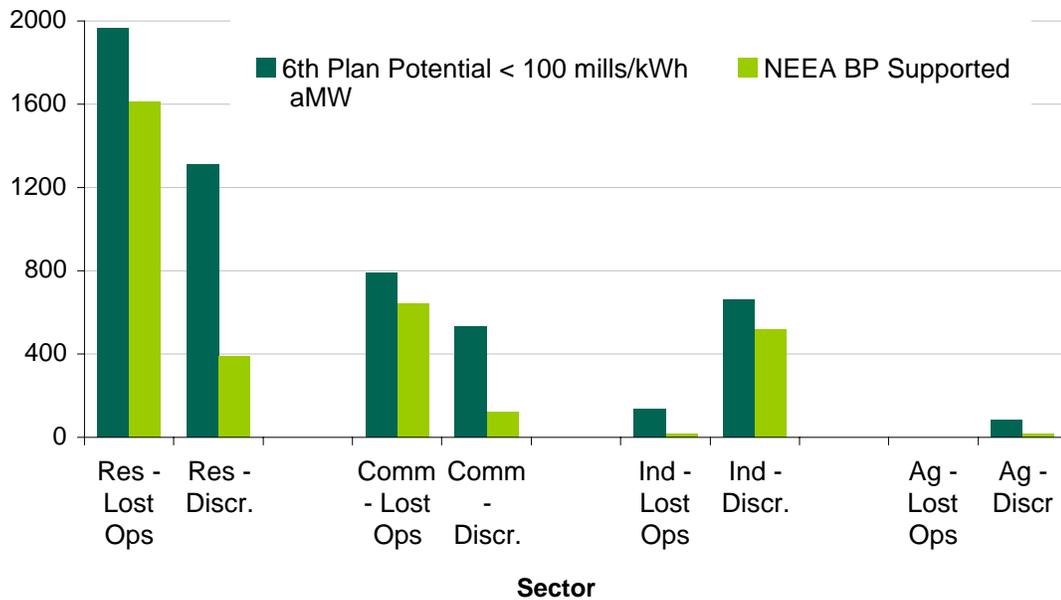
**Analysis Summary.** The analysis of draft data from the Council suggests a total regional technically achievable potential of just under 5,500 average megawatts; roughly double what was identified in the 5th Power Plan. Of this potential, NEEA's projected activities for the 2010-2014 Business Plan provide support for markets that would affect roughly 3,300 aMWs or just about 60% overall. However, when split into lost opportunities versus discretionary resources, NEEA provides significantly more support for lost opportunities (79%) and less for discretionary resources (40%). This is probably appropriate given that discretionary resources tend to be better targets for local utility programs (e.g. weatherization, lighting retrofits). Table 6-3.1 below illustrates the breakdown by resource type.

**Table 6.3-1. Summary Mapping of 6th Plan to 2010-2014 BP**

	6 <sup>th</sup> Plan Resource Potential <100 mills/kWh	Supported by NEEA 2010-2014 Business Plan	%
Total Lost Opportunities	2894	2275	79%
Total Discretionary	2588	1042	40%
Total	5482	3317	61%

Figure 6-3.1 below illustrates a more detailed breakdown of the comparison by sector and resource type.

**Figure 6-3.1. 6th Plan Technically Achievable Energy Savings Potential by Sector and Resource Type Mapped to 2010-2014 Business Plan Market Support**



**Gap analysis.** In order to better understand the gaps between the 2010-2104 Business Plan and the 6th Plan, measures were sorted by total potential into “top 10” lists for each sector separated into lost-opportunity and discretionary resources. These top-10 measures represent 84% of the total potential in the 6th plan.

In lost opportunity markets, seven of the top-10 residential and 8 of commercial measures are supported by the 2010-2014 Business Plan. For discretionary resources, only 2 residential and 2 commercial measures are supported. For industrial, 3 lost opportunity and 6 discretionary top-10 measures are supported. Table 6-3.2 below shows the detail by sector and resource type.

**Figure 6-3.2 Top-10 6<sup>th</sup> Plan Measures and Gap Analysis.**

	6 <sup>th</sup> Plan Potential <100mills/kWH aMW	Top 10 Included in 2010-2014 Business Plan	NEEA Business Plan Supported aMW
Res – Lost Ops	1806	7	1512
Res – Discr.	1311	2	387
Comm – Lost Ops	661	8	588
Comm – Discr.	522	2	121
Ind – Lost Ops	74	3	3
Ind – Discr.	193	6	122
Ag - Lost Ops	0	0	0
Ag - Discr	64	2	7
Total Lost Ops	2541	18	2104
Total Discretionary	2089	12	638
Total	4630	30	2742

**Conclusions.** Although brief, the mapping exercise indicated that there is already fairly good alignment between the 6th plan and the 2010-2014 Business Plan. This is especially true for lost-opportunity resources that are traditionally better targets for upstream focused activities or codes and standards efforts. This is less true for discretionary markets, although NEEA has targeted some high-priority markets in these markets.

**Future Efforts.** NEEA staff will be working with regional stakeholders to further understand the details of the 6<sup>th</sup> Plan and refine the levels of support included in the Business Plan. An additional analysis of these measures from the perspective of key support activities (e.g codes or standards, local programs, upstream market interventions) and will need to be conducted. NEEA will integrate the outcome of these activities as part of the portfolio management process described in more detail in the 2010-2014 Business Plan.

A more detailed report of this analysis is available upon request.



**Vision:** Energy efficiency is a cornerstone of a vibrant sustainable Northwest.

**Mission:** Mobilize the Northwest to become increasingly energy efficient for a sustainable future.

