INNOVATION MEETS DEMONSTRATION

A PROSPECTUS FOR CATALYZING GROWTH IN THE PUGET SOUND'S ENERGY EFFICIENCY TECHNOLOGY CLUSTER

THE METROPOLITAN BUSINESS PLANNING INITIATIVE
The Puget Sound economy is strong—and fortunate. If it weren't for decisions by the likes of Bill Gates and Bill Boeing, we wouldn't be the leading innovative and entrepreneurial region that we are today. And while we are proud of our success, we also know that relying on luck is not an effective plan. In today's competitive global economy, resting on your laurels is tantamount to stepping backwards. Instead, we need to be strategic in our thinking and intentional in our actions, maximizing our resources toward ensuring job creation and long-term prosperity for our region's residents. Which is why the Prosperity Partnership—our region's coalition of more than 350 business, government, nonprofit, labor, and education organizations—has been so excited to participate in the Metropolitan Business Planning Initiative.

To us, the Metropolitan Business Plan approach takes everything we know about the ingredients for successful regional economic development and puts it into a comprehensive, holistic framework. It focuses our region's collective action on how our unique assets and capacities interact to create prosperity, and it enables the identification of those key initiatives that will catalyze our region's economy. In a time of limited capacity and funds, business planning allows us to identify the most promising, bottom-line oriented initiatives to spur economic growth and long-term competitiveness in the central Puget Sound.

In particular, we know that we must consistently foster new strengths even as we continue to nurture existing ones. Given global trends, and our mix of industries, human capital, innovation capacity, and environmental consciousness, the clean technology industry generally—and the energy efficiency industry in particular—is a natural focus as a potential next major cluster. The Pacific Northwest is already a hub of energy efficiency activity, with multiple programs, policies, and funding streams that address the deployment of existing energy efficiency products and services. The key is to find the niche that will not just grow locally, but compete globally, and build from and strengthen all aspects of our economy. One of the central findings of our Metropolitan Business Plan is the huge potential that the growing demand for technologies to achieve energy efficiency presents for our region. To grasp this opportunity to create a dominant new cluster, we must strengthen and catalyze the convergence of our existing base of industries, human capital, and innovation.

The Building Energy-Efficiency Testing and Integration (BETI) Center and Demonstration Network is such a catalytic initiative, carefully designed to support the emergence of a powerful advanced energy efficiency technologies cluster. By allowing new innovations to demonstrate their effectiveness in real-world settings, we are facilitating the pipeline for more effective, more integrated solutions to the energy efficiency challenges of buildings throughout the world. Working with our partners in business and government at the local, state and national level, we look forward to making BETI a national resource to increase the development and export of clean technology.
INNOVATION MEETS DEMONSTRATION

A PROSPECTUS FOR CATALYZING GROWTH IN THE PUGET SOUND’S ENERGY EFFICIENCY TECHNOLOGY CLUSTER
To stay on the competitive edge, the Puget Sound region must foster the growth of new cluster opportunities. Specifically, our region believes the technologies that will be the backbone of the clean technology industry generally—and the energy efficiency industry in particular—hold exciting potential for future job growth.
THE PROPOSITION

The central Puget Sound region is one of the nation’s most vibrant economies, ranking at or near the top of the largest 100 U.S. metros on measures like productivity, talent attraction, and innovation. Yet, to stay on the competitive edge, Puget Sound must foster the growth of new cluster opportunities. Specifically, our region believes the technologies that will be the backbone of the clean technology industry generally—and the energy efficiency industry in particular—hold exciting potential for future job growth. Capitalizing on this opportunity will require complementary strategies addressing human capital, innovation, governance, and the role of other industry clusters.

Our proposed new Building Energy-Efficiency Testing and Integration (BETI) Center and Demonstration Network is a vital ingredient in catalyzing the establishment of an internationally recognized cluster in energy efficiency software and automation technology. It specifically addresses the challenges of technology commercialization by lowering two of the key market barriers for local companies with “smart and efficient” products: the validation of their effectiveness in real-world settings and their integration with other aspects of building efficiency. More broadly, BETI harnesses our existing advantages—exceptional strength in information technology, the environmental ethos of our residents, the long history of policy and programmatic support for energy efficiency, and the major investments being made by companies and local jurisdictions—to support a highly networked, innovation-driven, entrepreneurial region in its efforts to take advantage of the 21st century global economy.

This innovative proposal matches regional strengths with business opportunity. In particular, BETI will:

► Build upon and reinforce complementary initiatives to strengthen human capital, innovation and related industries like information technology and manufacturing
► Draw on the region’s existing competitive advantage in the building energy efficiency (EE) sector
► Fill a vital commercialization gap between technology development and market adoption by providing verification services for promising new products
► Tap into a huge EE market expected to top $700 billion in the U.S. alone by 2030
► Sustain itself financially through fee-for-service revenues within five years of start-up
► Benefit from the leadership of a wide range of public and private sector entities that are committed to making the Puget Sound a leading regional EE hub

Both private and public sector leaders will benefit from engagement in BETI:

► Businesses within the cluster or related clusters will expand their efficiency, markets and outputs, while other businesses—from real estate developers to utilities—will be able to incorporate new energy efficiency goods and services developed by BETI, reducing costs and helping them meet conservation requirements and building energy use codes
► State and local governments will reap the benefits of expanding economic activity and jobs, while maximizing their return on investment
► Federal agencies will reap the benefits of expanded economic activity, while better achieving their goals around innovation clusters, export promotion, and green technology development
Puget Sound is well-positioned for future success in the “next” American economy.

**LEADING THE NATION.** The Puget Sound metropolitan area is a recognized leader in regional economic competitiveness. In 2008, the region’s per capita productivity (measured as per-worker gross metropolitan product) reached $100,233, fully 35 percent above the national average, and its job growth of 11 percent between 2002 and 2008 was more than double the national rate. It is also a top-10 metro exporter (when compared to the 100 largest U.S. metros), home to a highly-educated population, and a highly diverse economy developed over decades in knowledge-intensive fields like information technology, aerospace, clean energy, and life sciences. As a result, Puget Sound has weathered the Great Recession better than many other parts of the country and is poised to lead in the next economy.

**LOOKING FORWARD.** Continued economic progress will require expanding beyond the region’s current industry base to drive future growth. While IT and aerospace remain top-performing regional industries today—and large regional clusters like trade and logistics, tourism, and the military have remained relatively constant—the region must identify those next opportunities that will drive job creation into the future. EE, along with the interactive media and global health sectors, is a growing innovation cluster that has the potential to meet those needs.

**FOCUSED ON THE NEXT ECONOMY.** National trends point to a post-recession economy that will be lower carbon and increasingly innovation- and export-oriented. While Puget Sound is already well-positioned along these lines, it is also proactively working to boost its future prospects within these contours. Energy efficiency technology is a strong example of the kinds of industries that will succeed in the future, and the region already has significant strength in this sector upon which to build. Puget Sound is also enhancing its regional innovation system to better support commercialization of new technologies and to better attract an increasing share of national venture investments.

**TARGETED APPROACH.** In the “next” economy, the energy efficiency niche has great potential to be a new high-value growth sector and regional economic driver for Puget Sound. Out of approximately 22,900 cleantech jobs currently in the region, 40 percent are already in fields related to building EE, spanning all major industry aspects. Given the region’s considerable assets in IT, green building and retrofitting, and precision manufacturing, Puget Sound will turn this existing strong concentration into a leading regional export sector and a key source of future job creation, focused particularly on energy management software, services, and technologies. To help catalyze the growth of this targeted niche cluster, Puget Sound will create BETI to test, verify, and facilitate the commercialization of new EE technologies.
THE VENTURE

The proposed Building Energy-Efficiency Testing and Integration (BETI) Center and Demonstration Network will allow EE innovators to test, evaluate, and integrate promising products and services before launching them to market.

DESIGNED FOR IMPACT. With particular focus on energy services, energy management software, and information and communications technology-enabled integrated systems, BETI will help commercialize new products, grow customer bases, increase market penetration, and ultimately spur regional business growth and attraction. Its suite of services will focus on two main activities:

➤ Laboratory testing and integration: A controlled facility will simulate a variety of building types and operations so users can verify the effectiveness of new building energy management software and automation technologies and test how well various products and installation designs work together.

➤ Field demonstration and testing: A network of owners and operators of diverse building types (residential, commercial, industrial, and institutional) will provide opportunities for demonstrating the performance of new technologies over time under “real world” conditions, verifying their energy savings.

In addition, BETI will ensure that its clients are connected to potential collaborators, as well as the services that will allow them to address a wide variety of related business issues:

➤ Facilitated Industry Collaboration: Intra-industry interaction across Puget Sound’s many existing EE-related trade associations, consortiums, and

### BETI FIVE-YEAR PRO-FORMA BUDGET SUMMARY

<table>
<thead>
<tr>
<th></th>
<th>2011 ($)</th>
<th>2012 ($)</th>
<th>2013 ($)</th>
<th>2014 ($)</th>
<th>2015 ($)</th>
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<tbody>
<tr>
<td><strong>REVENUES</strong> (cash only, excludes in-kind)</td>
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<tr>
<td>Restricted State Appropriation</td>
<td>5,500,000</td>
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<td>Federal Grants</td>
<td>3,500,000</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other donations/grants</td>
<td>150,000</td>
<td>1,250,000</td>
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<tr>
<td>BETI-generated fees and income</td>
<td>1,125,000</td>
<td>3,165,000</td>
<td>4,770,000</td>
<td>6,515,000</td>
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<tr>
<td>Research Grants</td>
<td>150,000</td>
<td>375,000</td>
<td>500,000</td>
<td></td>
<td></td>
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<tr>
<td>Rents and Marking Co-Op Income</td>
<td>105,000</td>
<td>105,000</td>
<td>105,000</td>
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<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>150,000</td>
<td>11,375,000</td>
<td>3,420,000</td>
<td>5,250,000</td>
<td>7,120,000</td>
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<td><strong>EXPENSES</strong> (cash only, excludes in-kind)</td>
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<td></td>
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<td></td>
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<td>Legal and consultant fees + PSRC staff</td>
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<td>90,000</td>
<td>10,000</td>
<td>10,000</td>
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<td>BETI staff</td>
<td>386,208</td>
<td>663,000</td>
<td>663,000</td>
<td>663,000</td>
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<tr>
<td>Revolving Loan Fund capitalization</td>
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<tr>
<td>Facilities Build-out + Rent</td>
<td>1,325,000</td>
<td>1,050,000</td>
<td>1,050,000</td>
<td>1,050,000</td>
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<tr>
<td>Lab Equipment, Maintenance</td>
<td>4,000,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
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<tr>
<td>BETI Lab Contract + Network Costs</td>
<td>1,100,000</td>
<td>2,500,000</td>
<td>3,250,000</td>
<td>4,455,500</td>
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<tr>
<td>Other operating expenses, including web</td>
<td>785,000</td>
<td>1,526,000</td>
<td>1,526,000</td>
<td>1,526,000</td>
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<tr>
<td><strong>TOTAL EXPENSES</strong></td>
<td>118,000</td>
<td>9,186,208</td>
<td>5,949,000</td>
<td>6,699,000</td>
<td>7,904,500</td>
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<tr>
<td><strong>NET OPERATING GAIN/LOSS</strong></td>
<td>32,000</td>
<td>2,313,792</td>
<td>(1,779,000)</td>
<td>(449,000)</td>
<td>215,000</td>
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</table>
### BETI Fee and Service Structure

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Accessible Resources</th>
<th>Fees/Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users/clients</td>
<td>Lab and network testing facilities</td>
<td>Fee-for-service on a sliding scale based on client’s annual budget</td>
</tr>
<tr>
<td>Members</td>
<td>Industry outreach and programming</td>
<td>Varying levels of annual dues</td>
</tr>
<tr>
<td>Partners</td>
<td>Specific programs and events</td>
<td>A la carte payments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Eligible Users</th>
<th>Fees/Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory testing and integration</td>
<td>Potential users vetted by application evaluating previous testing attempts and products’ market readiness</td>
<td>Fee-for-service on a sliding scale based on client’s annual budget</td>
</tr>
<tr>
<td>Field demonstration and testing</td>
<td>Products and services vetted by a selection committee of BETI staff and board members</td>
<td>Fee-for-service; A revolving loan fund may also be used to cover some costs that uses projected energy cost savings for payback</td>
</tr>
<tr>
<td>Facilitated industry collaboration</td>
<td>All users/clients, members, partners</td>
<td>A la carte payments</td>
</tr>
<tr>
<td>Business Assistance</td>
<td>All users/clients, members, partners</td>
<td>A la carte payments</td>
</tr>
</tbody>
</table>

### How BETI fills gaps along the technology commercialization pathway

- **MARKET ADOPTION**
  - Continuous product improvement feeds back through the process

- **NEW ENERGY EFFICIENCY/TECHNOLOGY IDEA**
  - Developed by: *Research Universities* • *Businesses* • *Entrepreneurs*
  - Select Puget Sound Assets: *UW and WSU* • *Existing IT and manufacturing industry based and associated talent*

- **TECHNOLOGY TESTING IN SITU (TO DETERMINE RESULTS IN REAL-WORLD USE)**
  - Tested via: *User-occupied buildings of various types*

- **TECHNOLOGY PROOF OF CONCEPT AND INTEGRATION**
  - Tested and achieved via: *Laboratory testing* • *Modeling / simulation* • *Collaboration*

- **BETI will serve this space**

- **TECHNOLOGY DEVELOPMENT**
  - Conducted using: *Incubators / accelerators* • *Commercialization assistance* • *Private investment*
  - Select Puget Sound Assets: *UW C4C* • *McKinstry Innovation Center* • *NW Energy Angels* • *Robust VC networks*

Research networks will help motivate different businesses, researchers, utilities, and other players to work together to address shared technical challenges and market opportunities.

> **Business Development, Commercialization, and Regulatory Assistance:** Referrals to resources for financing, business planning, regulatory assistance, export promotion and other services will facilitate the commercialization of new products and services by BETI users.
**Addressing Market Barriers.** BETI’s services will tackle two major market barriers that inhibit regional EE entrepreneurs from successfully launching new products into the market. First, BETI’s performance verification and demonstration services will help alleviate the first buyer challenges that result when building owners and operators are uncertain how new and emerging energy efficiency goods and will actually perform in “real-world” conditions, and thus withhold investment. Second, BETI’s integration services will address the need for improved technology integration so that innovators can identify and improve how new EE goods and services interact with the whole complex system of design, materials, software, and operations that together determine a building’s energy efficiency.

**Focusing on Implementation.** BETI will operate in the Puget Sound as a public entity, governed by a board of the region’s key public and private stakeholders. A lean six-person management staff will handle operations, while a hired master contractor will provide the objective, reliable technical expertise to manage lab and field testing services. BETI will sustain office and lab operations, staff, and contractors on self-generated revenues five years after initial implementation funding is sought and gained from a mix of private sponsorships and state and federal grants.

**Seizing Market Opportunities.** BETI will enable Puget Sound’s EE innovators to make great strides in tapping into the industry’s huge and growing market potential. McKinsey & Company’s July 2009 “Unlocking Energy Efficiency in the U.S. Economy” report estimated a need for domestic investment of $520 billion through the year 2020 to take advantage of the full potential of the energy savings available to this country. More targeted projections indicate that by 2030, the total U.S. EE market is expected to top $700 billion, up from $300 billion in 2004. Specifically, the U.S. market for building automation and controls technology is projected to grow to $6.8 billion.

Global estimates for some of Puget Sound’s primary trading partners indicate huge international market potential as well. For example, HSBC’s “Sizing the Climate Economy” report from September 2010 projects a $59 billion building energy efficiency industry in the European Union, $58 billion in China, $24 billion in India, $10 billion in Japan, and $9 billion in Brazil in 2020.

**Bringing Together All the Stakeholders.** BETI’s services will be available to individuals or organizations wishing to test and/or verify promising new EE innovations, including researchers, start-up businesses, established product, service, and software providers, and national and international customers. In addition, BETI’s industry outreach and programming activities will involve potential member entities like the Pacific Northwest National Laboratory (PNNL), the University of Washington (UW), Washington State University (WSU), regional utilities, energy service companies, the building trades, cleantech investors, and large-scale EE companies/integrators. BETI will also invite participation from potential partners interested in growing this niche cluster, such as state, regional, and local governments, commercialization organizations, workforce development programs, military facilities, and banks and investment firms.

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### BETI will help the region capitalize on numerous market opportunities

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<tbody>
<tr>
<td>2004</td>
<td>$39 billion</td>
<td>$140 billion</td>
<td>$68 billion</td>
<td>$15.8 billion</td>
<td>$75 billion</td>
<td>$51 billion</td>
<td>$6.8 billion</td>
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<tr>
<td>2013</td>
<td></td>
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<tr>
<td>2020</td>
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</table>

Source: American Council for an Energy Efficient Economy, Pike Research, Lux Research
THE TEAM

BETI boasts an impressive leadership team committed to propelling the proposal from concept to reality.

**LEAD PROJECT MANAGEMENT.** Puget Sound Regional Council (PSRC), which serves as both central Puget Sound’s metropolitan planning organization and regional economic development entity, is responsible for organizing BETI and getting it off the ground. PSRC already capably manages a deep portfolio of region-wide economic, transportation, and land use activities, and generates significant stakeholder support and input on priority regional initiatives through its 350-member strong Prosperity Partnership coalition.

**PROJECT CO-CHAIRS.** A very experienced group of regional leaders representative of BETI’s base of stakeholders directed the development of the BETI proposal and remain involved in overseeing its implementation. They include local elected officials, the president of the University of Washington, and heads of both the Greater Seattle Chamber of Commerce and the Seattle Foundation. With the perspectives of these institutions represented in BETI planning, the proposal is already generating broad regional buy-in.

**PROJECT STEERING COMMITTEE.** Forty representatives from industry, community, and the workforce and economic development fields served on the BETI project steering committee, helping to ensure the proposal is grounded in market and implementation realities:

- Battelle/Pacific Northwest National Lab
- Boeing Company
- City of Everett
- City of Seattle
- Cypress Venture Partners
- EnerG2
- Greater Seattle Chamber of Commerce
- Kitsap County
- McKinstry Company
- Microsoft Corporation
- Northwest Energy Efficiency Council
- Port of Tacoma
- Puget Sound Energy
- Seattle Foundation
- Seattle Northwest Securities
- ShoreBank Enterprise Cascadia
- Snohomish County Public Utilities District
- South Seattle Community College
- U.S. Navy
- University of Washington
- Verdiem
- Washington State Department of Commerce
- Washington State University
- Workforce Development Council of Seattle-King County
**THE ASK**

Business, regional, state, and federal leaders all have a stake in BETI’s implementation, and have important roles to play in helping ensure its success.

**BUSINESS.** For businesses in the EE industry, BETI will provide a unique suite of services not available elsewhere, helping companies attain vital product performance data needed to secure buyers for their products and services. For those businesses in related fields—from utilities to real estate developers—BETI will facilitate the development of products that will help meet conservation goals and building energy codes. To support these outcomes, these businesses can:
- Invest start-up funding to support BETI’s initial operations and program development
- Become customers of BETI’s fee-for-service programs
- Provide board leadership

**STATE GOVERNMENT.** Through BETI, the state of Washington can continue the great momentum and organizational collaboration developed during the region’s recent bid for the Department of Energy’s Energy Efficient Building Systems Regional Innovation Cluster (E-RIC) grant award and support goals outlined in the Clean Energy Leadership Council strategy. In particular, the state can:
- Appropriate funds to construct BETI’s facilities and purchase needed equipment
- Connect BETI to other state EE initiatives aimed at retrofits and weatherization
- Open state buildings to participate in the BETI demonstration network

**REGIONAL CIVIC AND GOVERNMENT LEADERS.** For Puget Sound leaders, BETI can ultimately enhance future economic competitiveness for the whole region by boosting entrepreneurship, job creation, export potential, and energy savings. To advance BETI, these leaders can:
- Coordinate BETI’s activities with their related EE policies, programs, and investments
- Seed a revolving loan fund to help finance real-world demonstrations of building EE innovations
- Allow their facilities to be used in the BETI demonstration network

**FEDERAL GOVERNMENT.** BETI offers federal leaders a way to address national goals, such as supporting regional innovation clusters, doubling exports, bolstering commercialization support structures, and producing buildings that use less energy. To support BETI, federal policymakers can:
- Better align the efforts of the many agencies that BETI’s strategy can involve (e.g., the Economic Development Administration, the Small Business Administration, the International Trade Administration, and the departments of Energy and Defense, among others). This includes greater federal-level interagency coordination to deliver integrated responses to these kinds of opportunities, as well as region-level field office coordination to provide a “one-stop” for regional implementers
- Provide more multi-agency funding opportunities, like the federal E-RIC competition but with more modest grant amounts
- Improve energy efficiency export promotion data tracking and technical assistance
- Open federal buildings to participate in the BETI demonstration network
ETI will result in 1,000 new jobs for the region by 2020, and $140 million in annual economic impact—a return on investment of almost 18:1.

With the U.S. market for building automation and controls technology projected to grow to $6.8 billion by 2030 and with a commensurate market internationally, the overall market opportunity is $14 billion. Therefore, a reasonable assumption of a 1 percent increase in market share for the Puget Sound region by 2020 would result in a $140 million annual economic impact. This 1 percent growth is in line with HSBC’s estimation that the United States as a whole will increase its global market share in the energy efficiency industry from 20 percent in 2009 to 21 percent by 2020.

ETI’s impact comes from two sources. First is the direct impact that ETI services will have on its clients’ ability to expand their market share. Second, more broadly, is ETI’s role in establishing an internationally recognized energy efficiency software and automation technology hub in the region, which will attract new companies and new investment while facilitating increased exports.

COMPANY EXPANSION, CREATION, AND ATTRACTION. At full scale, ETI will be working with approximately a dozen clients at any one time, ranging from large corporations doing multiple building tests to small entrepreneurs with more limited scale. On an annual basis, this means that 24 to 48 new technologies are being validated and sent into the marketplace. For existing companies, ETI services will allow for an expansion of staff to support the increased market share they can expect from having a significant market advantage over their non-validated competitors. For entrepreneurs, ETI demonstration will allow them to convert their ideas into viable products, spurring new firm creation. Finally, as the international brand of this regional cluster grows, national and international companies will want to relocate here, both to collaborate with others as well as to access ETI services. Overall, the impact of this business expansion, creation, and attraction will result in a 10 percent increase in our region’s energy efficiency industry, generating 1,000 new jobs for our region’s residents.

INVESTMENT ATTRACTION. By helping its clients refine their products and improve their readiness for market launch and success, ETI will boost the overall attractiveness of its clients to potential investors. In fact, by helping to brand the Puget Sound as an international hub for the development of this kind of technology, more capital will flow to the region’s EE industry in general, as top clean tech investors come looking for “the next big thing.” While Washington state attracted $200 million in cleantech venture capital in 2008, California attracted $3.5 billion, and so we can expect a significant shift from current regional levels. A conservative estimate would be at least a 25 percent increase in regional EE venture capital investment, or an additional $50 million.

EXPORT PROMOTION. Approximately 75 percent of sales growth from ETI clients will come from domestic markets, due to proximity and ease of doing business; commensurately, around $100 million of the economic impact of ETI will be from U.S. sales. However, through a combination of ETI support and related local, state and federal activity, we foresee a 25 percent increase in international sales of energy efficiency software and automation technology by local firms. Again, these companies will be more competitive in the international market because of the third-party validation of their products. Top markets for initial export will be Canada, France, and Germany, as well as Japan and South Korea. Washington currently does $17 billion in trade with these countries, and so a $40 million increase from EE technology sales is a reasonable assumption.
IMPLEMENTATION CHALLENGES

In pursuing BETI, stakeholders will have to successfully negotiate a number of factors.

COMPETITIVE LANDSCAPE. Nearly all U.S. regions are vying for some role in the clean energy economy and many of these places also have particular strengths in the energy efficiency niche. For example, Silicon Valley boasts a large number of EE companies and an internationally-admired innovation ecosystem; Denver has a strong cleantech industry base and is located in close proximity to the Department of Energy’s primary lab for energy efficiency research and development; and Philadelphia is the recent winner of the potentially catalytic $122 million E-RIC grant from the Department of Energy. However, the Puget Sound can compete in this landscape, given the strength of its existing EE industry profile, its national reputation as a green leader, and the BETI plan to facilitate the validation and market adoption of new energy efficiency technologies.

INDUSTRY CHALLENGES. A number of aspects unique to the EE sector make economic development engagement in this space difficult. For starters, the sector is extremely fragmented across a variety of players, including building owners, designers, technology developers, and utilities. Further, the uniqueness of residential and commercial buildings means that structures have few common features that can be upgraded at scale, and financing tools for retrofits are still in short supply. Nonetheless, the EE market is a growth market, and its standout segments align favorably with the Puget Sound’s industry assets. BETI will directly tackle some of these challenges, facilitating collaboration and lowering the technological uncertainty that serves as a disincentive for investment.

POLICY UNCERTAINTY. Although EE is a priority for federal, state, and local governments, and public and private utilities, the programs, policies, and incentives they offer vary greatly across place and time, making it difficult to build scale. Furthermore, the end of federal funding flows for EE through the American Recovery and Reinvestment Act (aka ARRA or the 2009 “stimulus” bill) creates uncertainty about the level of future federal commitment in this arena. One way BETI addresses the public policy challenges is by explicitly connecting with private sector stakeholders who have market incentives to engage in EE demonstration and testing and who have the resources to sustain the BETI effort in the longer run without public subsidies. At the same time, BETI will maximize the impact of what limited public investment can be made in EE technology development.
THE RIGHT IDEA IN THE RIGHT PLACE AT THE RIGHT TIME

Overall, the proposed BETI has all the pieces in place to succeed.

THE RIGHT IDEA. Buildings are responsible for 40 percent of all primary energy use in the United States, and policy leaders as high up as the energy secretary have said that reducing U.S. building energy consumption provides one of the fastest, cheapest, and most direct routes to helping meet U.S. and world green and clean energy goals. President Obama's Better Building Initiative catalyzes this effort even further. Against this backdrop, BETI’s value proposition is clear: The provision of testing, demonstration, and business assistance services to Puget Sound EE innovators will help them take advantage of national and global market trends to better grow this regional cluster, turn it into a major export sector, and brand the region as leader in this industry niche.

THE RIGHT TIME. Trends point to major growth in the national and international energy efficiency markets over the next couple of decades, and the policy environment grows increasingly favorable of green building pursuits. In the U.S. alone the energy efficiency sector is projected to expand to $700 billion by 2030, up from $300 billion in 2004. With this industry sector really poised to take off, pursuing BETI now is a smart strategy for helping to position the Puget Sound at the forefront of staking a leadership claim in this niche before any other region fully establishes itself as a regional, national, or international energy efficiency hub.

THE RIGHT PLACE. The Puget Sound is recognized as a leading region in the innovation economy, having supported the birth and incredible growth of technology-driven heavyweights like Microsoft, Boeing, and many others. The region also has considerable experience in planning and executing regional initiatives. Moreover, the region boasts an array of assets that can be deployed to help implement BETI, including progressive utilities; strong research capabilities at UW, WSU, and PNNL; major military bases with orders to reduce energy consumption; related large industry clusters in IT and manufacturing; and a well-developed international business infrastructure capable of selling energy efficiency goods and services to the world.
ABOUT METROPOLITAN BUSINESS PLANNING
This prospectus is a part of a larger metropolitan business planning initiative led by the Metropolitan Policy Program at Brookings in collaboration with Brookings Non-Resident Senior Fellow Robert Weissbourd. Three regional business plans and associated documents with metro partners in Northeast Ohio, Minneapolis Saint Paul, and the Puget Sound region have been developed. Each plan situates the current market position of the pilot metro; details emerging regional strategies for generating metro prosperity; and advances a detailed development initiative in one pressing area that promises to deliver successful metro growth in a next American economy that is more export-oriented, lower-carbon, more innovation-fueled, and opportunity rich. These business plans also solicit tailored responses for their achievement from federal, state, and local leaders.

ABOUT THE BROOKINGS-ROCKEFELLER PROJECT ON STATE AND METROPOLITAN INNOVATION
This is part of a series of papers being produced by the Brookings-Rockefeller Project on State and Metropolitan Innovation.

States and metropolitan areas will be the hubs of policy innovation in the United States, and the places that lay the groundwork for the next economy. The project will present fiscally responsible ideas state leaders can use to create an economy that is driven by exports, powered by low carbon, fueled by innovation, rich with opportunity, and led by metropolitan areas.

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FOR MORE INFORMATION

This investment prospectus is a distilled version of a full-length, fully documented regional business plan that can be found here:
www.prosperitypartnership.org/businessplan.htm

Eric Schinfeld
Program Manager for Economic Development
Puget Sound Regional Council/Prosperity Partnership
eschinfeld@psrc.org