Comment

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Oregon's Big Gamble: BETC and the Economics of Renewable Energy and Conservation

When the Oregon legislature passed the Business Energy Tax Credit (BETC) (originally called the Renewable Energy Resource Facility Tax Credit) in 1979, the word "energy" had a very

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different meaning than it does today. Six years earlier, in 1973, the OPEC oil embargo awakened the United States to the reality that oil has a social price beyond the economic value of a barrel. Wild swings in gasoline prices resulted in massive inflation and crashes in the stock market. Long lines formed outside of gasoline stations that were required by law to ration gasoline to prevent shortages.[1] Between 1973 and 1979, the price of a barrel of oil rose from less than $10 per barrel to over $40 per barrel.[2] In response to these issues, President Jimmy Carter created the Department of Energy on August 4, 1977, and put solar panels on the roof of the White House.[3] Outside of a sometimes-vocal minority of environmentalists, energy conservation was a way to reduce the United States' dependence on foreign oil, to save a few dollars on home heating, and to protect a previously known way of life. In 1979, the Oregon legislature devised the novel idea of providing tax credits for energy efficiency and renewable energy generation projects in order to help Oregon businesses compete in a world where energy was suddenly expensive.

Fast forward more than thirty years, and the BETC program still survives. Increased from a maximum $3.5 million credit[4] to a potential 50% tax credit of up to $20 million in project costs,[5] the BETC program is one of the largest state alternative energy incentive programs in the country. As the scope of the program changed after 1979, the country's perspective on fossil fuels also changed. Although energy independence is still a goal of energy conservation, the world has come to a near unanimous recognition that burning fossil fuels releases energy-trapping greenhouse gases into the atmosphere, resulting in the disastrous effects of global warming. Today, every wind turbine, photovoltaic cell, and geothermal station is built with an eye toward changing energy consumption in the United States to be completely emission-free. Yet, renewable energy systems are not currently competitive in a market where carbon

[1] *SHORTAGES: Gas Fever: Happiness Is a Full Tank*, TIME, Feb. 18, 1974, *available at* http://www.time.com/time/magazine/article/0,9171,942763,00.html.

[2] *U.S. and World Events & Oil Prices*, WTRG ECON., http://www.wtrg.com/oil_graphs/crudeoilprice7381.gif (last visited Nov. 11, 2010) (measuring the price of oil in 2008-dollars per barrel).

[3] *Timeline: The Modern Environmental Movement*, PBS, http://www.pbs.org/wgbh/americanexperience/features/timeline/earthdays/2/ (last visited Nov. 11, 2010).

[4] Renewable Energy Resources Act, ch. 512, § 5, 1979 Or. Laws 631 (formerly codified at OR. REV. STAT. § 469.200(1)); Energy Conservation Facilities Act, ch. 512, § 12, 1979 Or. Laws 633 (codified at OR. REV. STAT. § 316.140(4)).

[5] OR. REV. STAT. § 469.200(1)(a) (2009); OR. REV. STAT. § 315.354(1)(c) (2009).

emissions have no price. Renewable energy technology is expensive in contrast to conventional electricity generated through fossil fuels, such as coal and natural gas. If the United States, and Oregon in particular, wants to move to an emission-free economy in the near future, both public and private investments are necessary. And BETC, the little program created in 1979, is a key part of Oregon's strategy.

Nonetheless, as the BETC program has exponentially grown, its detractors have also grown. In the 2007–2009 biennial period, the BETC program cost Oregon $68.6 million in tax revenue.[6] Following the economic downturn of 2008, Oregon is experiencing the same or worse economic woes as the rest of the United States, and there have been loud cries that the BETC program should be either massively cut back or eliminated. With all state departments having to make tough cuts due to budget constraints, how can the massive tax expenditure of the BETC program be justified? To answer that question, I will examine the history of the BETC program, its successes, and its weaknesses in the hope of finding a long-term, sustainable, and effective way that the goals of the Oregon legislature can be met. Part I of this Comment reviews the history and passage of the BETC program and the changes that have been made to it over the last decade. Part II examines the current implementation of BETC and its economic, environmental, and public policy effectiveness. Finally, Part III considers the ongoing and upcoming legislative battles BETC faces and what steps need to be followed to continue the program's effectiveness.

I
ORIGINS OF THE BETC PROGRAM

A. The Original Bill

The first incarnation of the BETC program was codified in 1979 as ORS 469.185–225.[7] The program was called a Renewable Energy Resource Facility Tax Credit and was administered by the Oregon Department of Energy (ODOE), which was given authority to certify up to $30 million worth of tax credits to applicants meeting the

6 BUDGET & MGMT. DIV., DEP'T OF ADMIN. SERVS., STATE OF OREGON 2009–2011: TAX EXPENDITURE REPORT 178 (2008) [hereinafter 2009–2011 TAX EXPENDITURE REPORT].

7 Renewable Energy Resources Act, ch. 512, §§ 2–10, 1979 Or. Laws 631 (formerly codified at OR. REV. STAT. §§ 469.185–225).

directives of the program.[8] Individual eligible project sizes were capped at $10 million, and there was a $3.5 million maximum tax credit per recipient.[9] The policy goal of the program was:

In the interest of the public health, safety and welfare, it is the policy of the State of Oregon to encourage the conservation of electricity, petroleum, and natural gas by providing tax relief for Oregon facilities that conserve energy resources or meet energy requirements through the use of renewable resources.[10]

Thirty years later, under different circumstances and policy needs, the policy statement of BETC still reads the same.[11] The legislature laid out the details of the actual credit in ORS 316.140–42.[12] Tax credits were capped at 35% of project cost for all projects and were paid out on a schedule of 10% for the first two years, followed by 5% per year for the following three years.[13] Additionally, credit receivers were allowed to carry credits forward for three years.[14] Governmental entities were not allowed to receive credits.[15]

The Oregon legislature left the qualifications for credit-eligible projects wide open. Renewable energy resources were cataloged, nonexclusively, as biomass, "industrial or municipal waste, solar energy, wind power, water power or geothermal energy."[16] Energy conservation facilities were detailed in similar broad terms.[17] Comparing the qualifications set in the original measure with the more detailed modern laws and administrative rules highlights how experimental and nascent this technology was in 1979. With the foundations of the program set, BETC experienced many twists and turns over the next thirty years.

[8] Renewable Energy Resources Act, ch. 512, § 5 (formerly codified at OR. REV. STAT. § 469.200(1)).

[9] *Id.* (formerly codified at OR. REV. STAT. § 469.200(3)).

[10] *Id.* at ch. 512, § 2 (formerly codified at OR. REV. STAT. § 469.190).

[11] *See* OR. REV. STAT. § 469.190 (2009).

[12] Energy Conservation Facilities Act, ch. 512, §§ 12, 15–17, 1979 Or. Laws 633 (codified at OR. REV. STAT. §§ 316.140–42).

[13] *Id.* at ch. 512, § 12 (codified at OR. REV. STAT. § 316.140(1)).

[14] *Id.* (codified at OR. REV. STAT. § 316.140(6)).

[15] *Id.* at ch. 512, § 16, 1979 Or. Laws 634 (codified at OR. REV. STAT. § 316.142(1)).

[16] Renewable Energy Resources Act, ch. 512, § 3, 1979 Or. Laws 631 (formerly codified at OR. REV. STAT. § 469.185(4)).

[17] *See id.* (formerly codified at OR. REV. STAT. § 469.185(2)).

B. Legislative and Administrative Changes

The 1981 legislative session increased the applicable pool of credits to $40 million from $30 million two years before.[18] The next fourteen years saw little change to the bulk of the program until a complete restructuring of the ODOE in 1995[19] changed the administration of the program and the availability of credits.[20] Stripping away the $10 million dollar per-project cap, the Oregon legislature limited the credit to $2 million per project for manufacturing efficiency programs and cogeneration systems.[21] All other projects were capped at $100,000.[22] Legislative hearings for that session show a concern with the necessity of the program's cost now that solar power, in particular, was thought to be deployable without government subsidies.[23] In 1997, the next legislative session introduced a pass-through option for recipients of the credit, including Investor Owned Utilities (IOUs).[24] Although this option made the maximum credit that a recipient could receive substantially lower, the recipient could sell the credit to another party for a cash sum.[25] After the sale, the buyer would receive a tax credit equal to a value determined by the Office of Energy for each project.[26]

Laying out plans for the new millennium, the 1999 Oregon legislature greatly enhanced the BETC program's viability and put it on the path to where it is today. The cap on certified individual projects returned to the pre-1995 level of $10 million.[27] The 1999

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[18] Renewable Energy Resources Act, ch. 894, § 18, 1981 Or. Laws 1403 (codified at OR. REV. STAT. § 469.200(1)).

[19] OR. DEP'T OF ENERGY, ADMINISTRATIVE OVERVIEW 8–9 (2009), *available at* http://www.sos.state.or.us/archives/recmgmt/sched/special/state/overview/2008003energyadov.pdf. The Oregon Department of Energy was renamed the Office of Energy for the next four years.

[20] *Id.*

[21] Renewable Energy Resources Act, ch. 746, § 15a, 1995 Or. Laws 2308 (codified at OR. REV. STAT. § 469.200(2)(a)).

[22] *Id.*

[23] *Hearing on H.B. 2255, 2256, 2257, and 2259 Before the H. Comm. on State and Sch. Fin.*, 1995 Leg. (Or. 1995), *available at* http://arcweb.sos.state.or.us/legislative/legislativeminutes/1995/house/state_school_finance/hSSF041995.txt.

[24] OR. ADMIN. R. 330-090-140 (1997).

[25] Energy Conservation Act, ch. 534, § 9, 1997 Or. Laws 1119 (codified at OR. REV. STAT. § 469.206(1)).

[26] *Id.* (codified at OR. REV. STAT. § 469.206(2)).

[27] Renewable Energy Resources Act, ch. 365, § 2, 1999 Or. Laws 966 (codified at OR. REV. STAT. § 469.200).

measure also eliminated the $40 million cap on total certified programs and the $3 million cap on total eligible projects that a single applicant can qualify for in a given year.[28] Whether the decision to open the floodgates to all qualifying investors was a fiscally responsible idea is open to debate; this change is more than partially responsible for the current ballooning of the program. Nevertheless, the Oregon legislature incrementally changed the program over the next ten years to make it steadily bigger. In 2001, BETC projects certified for under $20,000 were allowed to take the entire credit that year instead of over the usual five years.[29] The legislative session of 2003 added BETC eligibility for sustainable building projects done under the Leadership in Energy and Environmental Design (LEED) standard, furthering the scope of the program.[30] These small steps prepared the way for the current implementation of the program, its most expansive version yet.

C. The Current Bill

The BETC program in its current form[31] allows for the largest tax credits in the history of the program. Credits are available in amounts of 35% and 50% of eligible project cost.[32] Energy efficiency and conservation projects can apply for a 35% tax credit up to $10 million,[33] which is distributed as 10% for the first and second years with the remaining 15% disbursed at 5% over the next three years.[34] Renewable energy generation, renewable energy equipment manufacturing, and certain types of high-efficiency combined heat and power projects are eligible for a 50% tax credit distributed over five years for 10% per year.[35] Renewable energy manufacturing projects can receive credits for up to $20 million; all other credits are

[28] *See id.*

[29] Environment and Energy Act, ch. 660, § 1a, 2001 Or. Laws 1632 (codified at OR. REV. STAT. § 315.354(1)(b)).

[30] OR. ADMIN. R. 330-090-0135 (2003).

[31] *See infra* Part III.B. The current statutory version of the BETC program, House Bill 3680, passed on February 10, 2010, and was signed into law on March 18, 2010. *See* H.R. 3680, 75th Legis. Assemb., Spec. Sess. (Or. 2010).

[32] OR. REV. STAT. § 315.354(4)(a), (d) (2009).

[33] *See id.* § 315.354(4)(d); OR. REV. STAT. § 469.200(1)(c) (2009).

[34] OR. REV. STAT. § 315.354(1)(a). Percentages used in Part I refer to eligible project cost, unless otherwise specified.

[35] *Id.* § 315.354(1)(c), (4)(a).

capped at $10 million.[36] Projects that cost less than $20,000 can apply the whole credit in one year.[37] All other projects may carry the credits forward for the next eight years.[38] The law also includes a pass-through option for all eligible projects. The pass-through option allows businesses that receive tax credits under the BETC program to sell their credits to other businesses.[39] This option is used not only by IOUs and nonprofits with no tax liability but also by new ventures with minimal tax obligations as a source of much-needed revenue in their start-up phase.

Eligible projects come in three general categories: renewable energy equipment manufacturing, renewable energy generation, and energy conservation and efficiency projects. Renewable energy equipment manufacturing projects, eligible for a credit of up to $20 million, receive the highest priority and represent a clear policy choice by Oregon lawmakers to focus the largest tax expenditures on the nascent energy equipment manufacturing sector.[40]

Renewable energy generation projects have the next highest maximum credits. These projects are eligible for a 50% tax credit up to $10 million.[41] The range of projects that can apply for these credits includes many types of alternative energy sources. Eligible renewable generation projects include passive solar space heat, solar water heat, solar space heat, solar thermal electric, photovoltaic cells, landfill gas, wind, biomass, hydroelectric, renewable transportation fuels, geothermal electric, geothermal heat pumps, cogeneration, hydrogen, industrial waste, refueling stations, ethanol, methanol, biodiesel, and fuel cells using renewable fuels.[42] Projects that use solar, wind, hydro, geothermal, biomass, or fuel cells (renewable fuels only) to produce energy, displace energy, or reclaim energy from waste may also qualify for a tax credit.[43] Renewable resource

36 OR. REV. STAT. § 469.200(1).

37 OR. REV. STAT. § 315.354(1)(b).

38 *Id.* § 315.354(6).

39 *See* OR. REV. STAT. § 469.206(1) (2009).

40 *See id.*; OR. ADMIN. R. 330-090-0105 (2010).

41 *See* OR. REV. STAT. § 469.206(1); OR. ADMIN. R. 330-090-0105.

42 *See* OR. ADMIN. R. 330-090-0110 (2010). Large wind power generation projects have different project eligibility caps much lower than other renewable energy generation projects. The lower caps for wind power generation and the reasoning behind them are discussed *infra* Part III.B.

43 *See* OR. ADMIN. R. 330-090-0110.

projects must replace at least 10% of the electricity, gas, or oil used.[44] The energy can be used on-site or sold. Notably, the credit for such projects cannot be received for replacing a current renewable energy generation system with a newer or more efficient technology or generation method.

Finally, there is a 35% tax credit of up to $10 million for energy conservation and efficiency projects.[45] Although the lower amount for these credits seems to indicate a lesser legislative priority, these projects are almost always smaller projects that have less of a lasting employment effect. Unlike the other two categories of projects, efficiency and conservation projects can be retrofits of existing buildings, as well as new construction.[46] General retrofit projects, such as efficient lighting replacement and weatherization projects for rental property, may be eligible for the program, as well as new construction projects, including energy efficiency and lighting. Retrofit projects must be 10% more energy efficient than the existing installation; lighting retrofits must be 25% more efficient than existing lighting.[47] For new buildings, all measures must reduce energy use by at least 10% compared to a similar building that meets the minimum requirements of the state energy code.[48] The BETC program uses the LEED certification system as an example of applicable new building designs.[49]

The ODOE promulgated new administrative rules on January 8, 2010, that changed parts of the BETC program to lower the pass-through rate for unused credits.[50] Previously, the ODOE set the annual rate of return for the buyer of the credit using its own internal formula linked to the type and size of the initial project.[51] The new changes peg the annual rate of return to five-year Treasury Note rates and the Consumer Price Index.[52] Depending on the project, the resulting rate will prospectively be between one-half to two-thirds of

[44] *Id.*

[45] OR. REV. STAT. § 315.354(4)(d) (2009); OR. REV. STAT. § 469.200(1)(c) (2009).

[46] *See* OR. ADMIN. R. 330-090-0110.

[47] *Id.*

[48] *Id.*

[49] *Id.*

[50] *See* OR. ADMIN. R. 330-090-0105 (2010).

[51] *Tax Law Alert: Oregon Department of Energy Issues New Rule Governing the BETC Pass-Through Rates*, STOEL RIVES LLP (Jan. 19, 2010), http://www.stoel.com/showalert.aspx?Show=6362.

[52] *Id.*

the previous rate. Although this rule change was not a game changer, it did predict a downsizing of the BETC program in the near future. The ODOE is further revising administrative rules to reflect the passage of House Bill 3680 that will go into effect by the end of 2010.[53]

II
EVALUATING THE BETC'S EFFECTIVENESS

The current BETC program is estimated to cost the state of Oregon $143.8 million in tax revenue for the 2009–2011 biennial period[54] and is projected to cost $243 million in the 2011–2013 period if the program is not changed.[55] The 2009–2011 BETC expenditure will account for over 10% of the total amount of income tax credits granted statewide. With such a large share of the state's revenue in a single program, taxpayers and legislators alike need to be sure that the program is having its desired effect. The BETC program is uniquely circular in its intended purpose: spend tax revenue on "clean" energy to save money on "dirty" energy. The practical effect of encouraging a "clean" energy industry goes beyond reducing carbon emissions to creating an entirely new industry of scientists, engineers, and manufacturers. To estimate the BETC program's effectiveness we must look at both the environmental and economic impact of the program.

A. Environmental Impact

1. Lowering the Usage of Fossil Fuels

By most measures, the BETC program has succeeded in limiting greenhouse gas emissions in Oregon. In the most recent year of reporting, 2008, the BETC program saved 39.7 trillion Btu (British thermal units) of fossil fuels.[56] Saving 39.7 trillion Btu is the

[53] *See Notice of Proposed Rulemaking Hearing*, OREGON.GOV, http://oregon.gov/ENERGY/CONS/BUS/docs/BETC_Cap_HearingNotice.pdf (last visited Nov. 11, 2010).

[54] 2009–2011 TAX EXPENDITURE REPORT, *supra* note 6.

[55] Harry Esteve, *State Lowballed Cost of Green Tax Breaks*, OREGONIAN, Oct. 31, 2009, http://www.oregonlive.com/news/index.ssf/2009/10/state_lowballed_cost_of_green.html.

[56] DEP'T OF ENERGY, ANNUAL PERFORMANCE PROGRESS REPORT (APPR) FOR FISCAL YEAR (2007–2008) 15 (2008) [hereinafter DEP'T OF ENERGY PROGRESS REPORT 2007–2008], *available at* www.oregon.gov/ENERGY/docs/perfmeasrpt.pdf.

equivalent of not burning 1.9 million tons of coal.[57] These nebulous numbers translate into a savings of 11.2 million Btu per person, using the latest population figures for Oregon (3.54 million).[58] In comparison, the average Oregonian uses 302 million Btu annually.[59] Based on these figures, BETC lowered the average person's energy consumption by 3.4% in 2008. To put these savings in context, the American Council for an Energy-Efficient Economy calculated that a 1% reduction nationwide—2.4% less than that achieved by the BETC program this year—in energy consumption would result in a savings of 240 terawatt-hours annually by the year 2012.[60]

Further compounding the usefulness of BETC program spending on lowering energy consumption is the nature of BETC projects. Excluding the credits that go toward renewable energy equipment manufacturing projects, both renewable energy and energy efficiency projects are gifts that keep on giving: retrofitting a school or building a wind farm produce long-lasting energy savings. As an example, renewable energy systems produce emissions-free Btu for an average lifetime of twenty years for onshore wind turbines.[61]

How do these energy savings compare to programs in other states? This question is a much tougher question to answer, as there is not a consistent state-by-state method of comparing individual programs. To compound this difficulty, the BETC program is unique in its expansiveness: the BETC program dwarfs similar programs in other states, both in size and cost. The Federal State Energy Program (SEP), which "provides financial and technical assistance for a wide variety of energy efficiency and renewable energy activities undertaken by the states,"[62] had a nationwide effect of saving 47.6

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[57] *See Energy Units*, AM. PHYSICAL SOC'Y, http://www.aps.org/policy/reports/popa-reports/energy/units.cfm (last visited Nov. 11, 2010).

[58] *Population by City Name*, OREGON.COM, http://web.oregon.com/towns/population_alpha.cfm (last visited Nov. 11, 2010).

[59] *Oregon Energy Summary*, U.S. DEP'T OF ENERGY, http://apps1.eere.energy.gov/states/energy_summary.cfm/state=OR (last updated June 10, 2010).

[60] Am. Council for an Energy-Efficient Econ., *The Energy Efficiency Performance Standard: A Fair and Effective Way to Realize the Economic and Environment Benefits of Greater Energy Efficiency* (on file with author).

[61] *Technical Lifetime of Wind Turbines*, RENEWABLE ENERGY SOURCES, http://www.renewable-energy-sources.com/2009/11/10/technical-lifetime-of-wind-turbines/ (last visited Nov. 11, 2010).

[62] MARTIN SCHWEITZER & BRUCE E. TONN, OAK RIDGE NAT'L LAB., AN EVALUATION OF STATE ENERGY PROGRAM ACCOMPLISHMENTS: 2002 PROGRAM YEAR 1 (2005), *available at* www.ornl.gov/sci/eere/PDFs/SEP_study.pdf.

trillion Btu in 2002. Six years later, the BETC program in Oregon alone saved 39.7 trillion Btu![63] While there may be a legitimate question about whether Oregon has the financial means to support the BETC program, there is little doubt that the program has had an actual, substantial effect on the way energy is used in Oregon.

2. Limiting Greenhouse Gases

By fundamentally changing the ways that Oregonians consume energy, the BETC program has significantly contributed to the worldwide effort to reduce emissions of greenhouse gases, specifically carbon dioxide (CO_2). Excluding the transportation sector,[64] in 2008 the United States emitted 3,889.1 million metric tons of CO_2, accounting for 81.3% of harmful greenhouse gases that contribute to global warming.[65] The BETC program in 2008 saved 4.06 million metric tons of CO_2.[66] That number seems small in a nationwide context, but Oregon's share of non-transportation CO_2 emissions in 2007 was 19.24 million metric tons.[67] The BETC program, therefore, decreased non-transportation CO_2 emissions in Oregon last year by 17.4%. These numbers may seem incredulous, but they highlight how much of a cumulative effect renewable energy programs can have. Wind turbines that were put up using BETC program incentives in 1990 are still running and adding carbon-free energy this year. Likewise, a building retrofit in 1984 is still keeping hundreds of pounds of carbon dioxide out of the atmosphere each year by using energy-saving double-pane windows and fluorescent lighting.

The BETC program has had a significant impact on fossil fuel consumption and greenhouse gas emissions in Oregon. However, without better ways to track different projects among states, it is difficult to measure the program's environmental effectiveness against other similar programs. Therefore, a comprehensive look into

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63 DEP'T OF ENERGY PROGRESS REPORT 2007–2008, *supra* note 56.

64 The BETC program has only a tangential impact on transportation energy consumption.

65 *See* U.S. ENERGY INFO. ADMIN., EMISSIONS OF GREENHOUSE GASES IN THE UNITED STATES 2008, at 1 (2009), *available at* http://www.eia.doe.gov/oiaf/1605/ggrpt/pdf/0573(2008).pdf (providing energy related CO_2 emissions by end use sector).

66 DEP'T OF ENERGY PROGRESS REPORT 2007–2008, *supra* note 56, at 27.

67 *See CO₂ Emissions from Fossil Fuel Combustion*, U.S. ENERGY INFO. ADMIN., www.epa.gov/climatechange/emissions/downloads/CO2FFC_2007.pdf (last visited Nov. 11, 2010).

the economic impact of the BETC program is necessary to grasp the full impact of the program and the value of the huge impact it has on Oregon's tax revenue generation.

B. Economic Impact

The maturation of the renewable energy market in Oregon has resulted in significant economic benefits to the state. Similar to the environmental effects examined above, the economic effects of the BETC program comes through two areas: (1) reducing energy consumption across the state through conservation projects and the use of renewable energy systems and (2) creating a cognizable "green" industry in Oregon through enticement of desired business with substantial financial incentives.

1. Lower Energy Usage Statewide

Saving trillions of Btu in traditional fossil fuel energy generation has a measureable economic value. In 2007, the most recent year from which such data are available, the BETC program saved over $100 million in net energy costs.[68] These savings represent both energy generated through renewable energy projects and energy saved through conservation programs and efficiency projects.[69] Net energy savings, as opposed to gross savings, calculate the impact of the BETC program over traditional government energy efficiency and renewable energy direct spending.[70] Therefore, the BETC program contributed to $100 million in energy savings above and beyond what direct government outlay in similar conservation programs would have achieved.[71] The real economic impact of the BETC program, then, is that it has leveraged state tax credits to incubate private sector investment and keep over $100 million in the pockets of taxpayers and businesses.

So how do the energy savings of the BETC program compare to other programs across the country? The most complete nationwide survey by the U.S. Department of Energy found that every federal

[68] ECONORTHWEST, ECONOMIC IMPACTS OF OREGON ENERGY TAX CREDIT PROGRAMS IN 2007 AND 2008 (BETC/RETC) 20 (2009) [hereinafter ECONOMIC IMPACTS OF OREGON ENERGY TAX CREDIT PROGRAMS], *available at* http://www.oregon.gov/ENERGY/CONS/docs/BETC_RETC_Impacts-020209_FINAL.pdf.

[69] *Id.*

[70] *Id.* at 10.

[71] *See id.* at 20.

dollar spent on state programs comparable to BETC saved $7.23 in annual energy costs.[72] The BETC program, which does not receive federal funds, is similar to programs funded by SEP. In 2008, BETC program spending produced $1009 in lifetime energy savings for every dollar spent.[73] In terms of energy cost savings alone, the BETC program beat the nationwide standard for value per dollar by over nine times.[74] The policy purpose of BETC goes beyond just energy cost savings, however, and into a program of nurturing a homegrown green economy.

2. Growing a Green Economy

Although the idea of the BETC program as an industry development driver was definitely not part of the 1979 legislative plan, the program has morphed into one of Oregon's best incentives for investors, manufacturers, and builders of sustainable business industries to move to the state. A recent report identified the BETC program as "one of few effective tools to help grow our economy."[75] So how effective is this tool?

In the first eight months of 2008 alone, the BETC program added $601.6 million to the state economy and created 4111 new jobs.[76] In comparison, the Dow Jones Industrial Average over that same period fell 37% from 13,264.82 to 8,378.95,[77] and the U.S. workforce shed 1.2 million jobs.[78] One way to look at why the BETC program was successful in the face of a nationwide recession is the type of industry and jobs that the program incentivizes. Green technologies and industries are part of a new global economy replete with venture capital and corporate investment aligned at gaining an edge in a quickly growing field. As the banking and construction industries

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[72] SCHWEITZER & TONN, *supra* note 62, at 26.

[73] DEP'T OF ENERGY PROGRESS REPORT 2007–2008, *supra* note 56, at 44.

[74] *Id.* at 45.

[75] OR. DEP'T OF ENERGY & BUS. OR., BUSINESS ENERGY TAX CREDIT FEBRUARY 2010 RECOMMENDATIONS 10 (2009) [hereinafter BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS], *available at* www.governor.oregon.gov/Gov/docs/betc_cvrltr_report_120109.pdf.

[76] ECONOMIC IMPACTS OF OREGON ENERGY TAX CREDIT PROGRAMS, *supra* note 68, at 29.

[77] *A Sampled History of the Dow Jones Industrial Average from 1900 to the Present*, DOW JONES INDUS. AVERAGE (DJIA) HIST., http://www.nyse.tv/dow-jones-industrial-average-history-djia.htm (last visited Nov. 11, 2010).

[78] David Goldman, *Jobs Lost in 2008: 1.2 Million*, CNNMONEY.COM, Nov. 7, 2008, http://money.cnn.com/2008/11/07/news/economy/jobs_october/index.htm.

imploded over the past year, entrepreneurs have been looking for a new growth area, and the BETC program has been very successful at growing new businesses in Oregon. Eighty percent of the certified BETC projects in 2007 would not have been completed absent the incentive.[79] If Oregon is seeking to become a major player in green and associated industries in the next decade, the BETC program represents the best way forward.

Further examining the type of economic output BETC supports can give an idea of growth areas. In 2007, renewable energy industries contributed to 63% of the program's economic output while receiving 35% of the credits.[80] Conservation and efficiency projects created 37% of savings while receiving 65% of the credits.[81] While these numbers point to a need to focus on the renewable energy sector over conservation, the certified conservation projects created 1145 jobs in 2007 compared to 939 jobs created by renewable industries.[82] Without further information regarding the relative wages of workers in each industry, it is difficult to advocate for evaluating the program based on these merits. What is clear is that there are substantial numbers of living-wage jobs created through the BETC program, making it an unambiguous success.

III
WHAT THE FUTURE HOLDS

> [T]he program . . . known as the Business Energy Tax Credit, has given millions of dollars to failed companies while voters are being asked to raise income taxes because the state budget doesn't have enough to pay for schools and other programs.[83]

An October 31, 2009, front-page article in *The Oregonian*, Oregon's biggest newspaper, shot a broadside of populist rage at the BETC program, painting it as an unmitigated disaster of historic proportions.[84] One commenter called for nothing less than impeachment or resignation of the governor because of the out of

[79] ECONOMIC IMPACTS OF OREGON ENERGY TAX CREDIT PROGRAMS, *supra* note 68, at 21.

[80] *Id.* at 22.

[81] *Id.*

[82] *Id.* at 24.

[83] Esteve, *supra* note 55.

[84] *See id.*

control BETC program.[85] Histrionics aside, there is immense pressure to reform the BETC program based on the huge tax expenditures it has produced in the last few years. The 2009 Oregon legislature passed House Bill 2180 to order an extensive economic analysis of the program,[86] and Governor Kulongoski ordered his own, less extensive, analysis to find recommended changes for debate in the 2010 special legislative session.[87] Taking some of these recommendations as a baseline for reform, the 2010 legislature reduced the size of the BETC program in House Bill 3680.[88] The bill, which Governor Kulongoski signed into law on March 18, 2010,[89] preserves the basic structure of the BETC program but significantly scales it back.

These recommendations and bills are not the end of the BETC conversation. The future of BETC will be decided in the 2011 legislative session after more studies and performance checks of the program are completed. To understand what the BETC conversation should focus on, I first examine the recommendations in the governor's report, then note which recommendations were used in House Bill 3680, and finally make recommendations for the future of BETC based on the history of the program and its successes.

A. The Governor's Report

On November 30, 2009, the ODOE and Business Oregon, a state agency under the Oregon Business Development Commission, released their recommendations on BETC for the February 2010 Special Legislative Session.[90] The report looked at seven potential areas of change, four of which warrant serious consideration.

First, the report recommended measures to increase accountability of parts of the BETC program.[91] Specifically, the report recommended codification of the ODOE's administrative rule changes from November 30, 2009, which, in addition to lowering pass-through rates for all BETC projects, added more administrative

[85] *Id.* (comment, Oct. 31, 2009, 7:51 PM).

[86] H.R. 2180, 75th Legis. Assemb., Reg. Sess. (Or. 2009).

[87] BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 2.

[88] H.R. 3680, 75th Legis. Assemb., Spec. Sess. (Or. 2010).

[89] Press Release, Governor Signs Business Energy Tax Credit Reform Legislation (Mar. 18, 2010), *available at* http://www.oregon.gov/Gov/P2010/press_031810a.shtml.

[90] BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75.

[91] *Id.* at 6.

procedures to help the ODOE hold BETC applicants to their commitments.[92] Previously, the ODOE had no recourse to "claw back" credits given to businesses that failed to complete their projects.[93] A clawback provision would enable the agency to reclaim credits from businesses that failed to complete their projects or did not use the credits properly. The new administrative rules also allow the ODOE to have more control when making conditions before final certification, collecting relevant data from the applicant, and canceling tardy applications.[94] These proposed rules became effective as temporary rules on May 27, 2010.[95]

Second, the report recommended capping the total allowable renewable energy generation tax credits allowed in an individual year.[96] Renewable energy generation projects represent the largest area of growth in the last two years and are largely the driving force behind the recent expansion of the BETC program.[97] The recommendation would effectively roll back the scope of the BETC program to its pre-1999 incarnation with a hard ceiling on the total cost of approved projects.[98] The governor's report does not advocate putting the previous $40 million cap back in place; it advocates introduction of a cap based on a low percentage of the gross operating revenue of energy suppliers in Oregon.[99] The report's recommendation to set the cap at a percentage of the industry's revenues would let the cap rise as the industry grows, which would theoretically ensure the viability of the program as long as businesses continue to invest in Oregon.[100]

Third, the report recommended capping the amount of credits that an individual applicant can receive per certified project in the renewable energy program.[101] Currently, successful applicants can

92 *Id.*

93 *See id.*

94 OR. ADMIN. R. 330-090-0130 (2010).

95 *Business Energy Tax Credits*, OREGON.GOV, http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml (last updated Aug. 9, 2010).

96 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 6–8.

97 *See* ECONOMIC IMPACTS OF OREGON ENERGY TAX CREDIT PROGRAMS, *supra* note 68, at 22, 28.

98 *See* Renewable Energy Resources Act, ch. 365, § 2, 1999 Or. Laws 966 (codified at OR. REV. STAT. § 469.200); BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 7.

99 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 7.

100 *See id.*

101 *Id.*

receive up to $10 million in tax credits on a $20 million certified project.[102] The $20 million project cap was reasonable ten years ago when the average renewable energy facility was much smaller, but there are now projects in the pipeline for over $1 billion.[103] In order to maximize tax credits, the current trend for some applicants is to break up a whole project (at least on paper) into smaller chunks to receive $10 million credits on small projects that are actually part of a larger single project.[104] The governor's report recommends a change to an individual cap for projects of over $100,000 from a $10 million credit to a 5% tax credit on projects up to $200 million.[105] This change would still allow applicants to receive the same $10 million credit but would eliminate an applicant's ability to game the system.

Finally, the report recommended extending the sunset date for the conservation and renewable equipment manufacturing BETC programs to 2016.[106] The conservation program has been the core of the BETC program since inception and has proven successful, although modest in its goals. The renewable equipment manufacturing program, the smallest of the three programs, is the most policy driven of the three and reflects a desire by the legislature to grow a new industry unique to Oregon. Together, these two programs represented only 34% of the total tax credits approved by the ODOE in 2008.[107] Implicit in recommending only two of the three programs is a recommendation to cancel or drastically rewrite the third program—renewable energy generation.

Clearly, the report identifies the renewable energy program as a target for major reform, whether through different caps on approved programs or a complete termination of funds for the program after 2012. It is important to recognize, however, that this report is based on the assumption that the ODOE will complete a much more thorough study[108] over the course of the next year to determine whether the current report's underlying assumptions on cost and effectiveness are correct.[109] This is very much a preliminary study;

102 OR. REV. STAT. § 469.200(1)(a) (2009).

103 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 14.

104 *See id.* at 7.

105 *Id.* at 8.

106 *Id.* at 9.

107 *See id.* at 4.

108 House Bill 2180 mandated a complete BETC study beyond the scope of this assessment. *See* H.R. 2180, 75th Legis. Assemb., Reg. Sess. (Or. 2009).

109 *See* BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75.

using it as a basis for a complete policy rewrite would be unwise. Whether the Oregon legislature used the report in this context or not, they made sweeping changes in House Bill 3680, the consequences of which may not be clear for some time.

B. The 2010 Special Legislative Session

House Bill 3680, which passed in the 2010 Special Legislative Session, rewrites the BETC statute in five broad categories: (1) new caps on the program, (2) timing of BETC credits, (3) new administrative rules and procedures, (4) changes to the pass-through mechanism, and (5) adding new qualifying renewable generation technologies.[110] An in-depth analysis of each change will evaluate the future viability of the program and point to ways to move forward in the 2011 legislative session.

First, House Bill 3680 set a hard cap on the renewable energy generation part of the BETC program.[111] For the biennium ending on June 30, 2011, and retroactively starting on January 1, 2010, the total amount of tax credits that the ODOE can approve for renewable energy generation projects will be limited to $300 million.[112] This cap, however, takes into account pre-certified projects that were approved before the cap was announced. Therefore, when the ODOE promulgated rules to comply with the new bill, $218 million of the $300 million under the cap had already been earmarked for projects.[113] The ODOE plans to set up multiple rounds of funding to disburse the remaining $81 million of BETC funds in 2010.[114] From July 1, 2011, to June 30, 2012, the cap will be lowered to $150 million and will also be disbursed in multiple rounds of funding.[115]

Interestingly, House Bill 3680 specifically applies the $300 million and $150 million caps only to "facilities using or producing renewable energy resources."[116] Renewable equipment

110 *See* H.R. 3680, 75th Legis. Assemb., Spec. Sess. (Or. 2010).

111 *Id.*

112 *Id.*

113 Or. Dep't of Energy, *Frequently Asked Questions: Changes in the Business Energy Tax Credit (BETC) Program*, OREGON.GOV, http://www.oregon.gov/ENERGY/CONS/BUS/tax/BETC-FAQ.shtml (last updated June 14, 2010).

114 *See* Or. Dep't of Energy, *BETC—Renewable Energy Projects*, OREGON.GOV, http://www.oregon.gov/ENERGY/CONS/BUS/tax/BETC-Renewables.shtml (last updated Oct. 13, 2010) [hereinafter *BETC—Renewable Energy Projects*].

115 H.R. 3680.

116 *Id.*

manufacturing projects have their own cap of $200 million for the biennium ending on June 30, 2011, another $200 million for the next biennium ending July 30, 2013, and a final $50 million for the remainder of the 2013 year.[117] Compared to renewable generation projects, the renewable equipment manufacturing program was made stronger with the program's extension through the 2013 calendar year. Whether conservation projects fall within either cap, however, is unclear. Some conservation projects "use" renewable energy resources by election or through local utility incentives, but other projects are simple weatherization retrofits that do not use any renewable energy sources. Historically, BETC conservation projects tend to use fewer tax credits and be smaller in scale compared to renewable energy projects. Therefore, it is unlikely that BETC conservation projects are included in this cap.

In addition to a cap on the whole renewable energy generation program, House Bill 3680 introduces a lower individual cap targeting the wind industry.[118] The bill caps wind tax credits at 5% of the total project cost and then gradually lowers the total credit cap from $7 million through 2010, $5 million through 2011, and $3 million after January 1, 2012.[119] Previous wind projects were not separated from other renewable energy generation projects and could receive a credit for 50% of a $20 million project cost.[120] While no policy reasons for the change are included in the bill, the wind industry in Oregon has grown exponentially in the past decade, making it a target for controlling costs. Further, there is a popular perception, not entirely true, that wind power is approaching parity with natural gas energy generation facilities and no longer needs governmental support.

The second focus of the bill is a rewrite of the BETC program timeline. The renewable energy generation and conservation programs are now set to sunset on July 1, 2012.[121] Renewable equipment manufacturing facilities projects will sunset on January 1, 2014.[122] The project certification and credit approval process will also change. A preliminary certification is valid for only three years,[123] and projects meeting final certification must stay in

117 *Id.*

118 *See id.*

119 *Id.*; OR. ADMIN. R. 330-090-0150 (2010).

120 OR. REV. STAT. § 469.200(1)(a) (2009).

121 H.R. 3680.

122 *Id.*

123 *Id.*

operation for five years.[124] Finally, credits will not be disbursed until the year after final certification is approved.[125] These changes underline a new commitment to accountability and efficiency that was previously missing from the BETC program. Formerly, a project could make final certification, receive and pass through the credits immediately, and never actually be completed. Now, applicants will receive no credits until they are at least a year into the process, which entails ODOE inspection and verification. The ODOE can now clawback credits if the applicant does not operate the facility for at least five years.

Third, the bill adds new administrative procedures to help the ODOE choose the most viable applicants for a smaller program. House Bill 3680 creates a tiered priority system that evaluates potential applicants on a range of desired factors.[126] Factors include the long-term viability of the project, demonstrated readiness to begin implementation, and expected life span of the facility, among others.[127] Applicants are now required to provide a statement about the expected number and types of jobs that will be created, which will further help the ODOE evaluate applicants for the best use of the state's resources.[128] All of these provisions are designed to address the BETC program's perceived lack of prioritizing useful projects, while weeding out businesses applying for credits for the sole purpose of reselling them.

Additionally, the ODOE found it necessary to implement another tiered application system to choose the best applicants to disburse the remaining $81 million in renewable energy generation credits left under the 2010 cap.[129] The rapid pace of legislated change in a small time frame left potential BETC applicants scrambling to send project proposals to the ODOE on time, and the ODOE responded to the resulting confusion with a very specific application process. The new process requires technical scoring of all projects submitted by a certain deadline, third-party review of the financial and engineering project estimates, and public disclosure of the results.[130] These

124 *Id.*

125 *Id.*

126 *Id.*

127 *Id.*

128 *Id.*

129 *See BETC—Renewable Energy Projects*, *supra* note 114.

130 *Id.*

requirements constitute a radical shift in the way BETC applications are processed and how projects are selected.

Fourth, the new bill, along with administrative rule changes, redefines the BETC pass-through mechanism. Instead of basing the pass-through rate on sliding percentages arbitrarily set by the ODOE (the mechanism in place before the January 8, 2010, administrative changes) or the current rate pegged to the annual rate of return to five-year Treasury Note rates and the Consumer Price Index, the BETC pass-through mechanism became much simpler.[131] The pass-through amount is calculated by dividing the tax credit amount by 1.3579.[132] This type of streamlining is a welcome addition and should help instill a (rarified) air of certainty in this part of the BETC application process.

Last, House Bill 3680 adds two new types of qualifying renewable energy generation sources to the BETC program. For the first time, applicants using or building energy storage devices and efficient truck technologies are allowed to claim BETC credits.[133] Besides addressing useful technologies that have previously been excluded from the BETC program, adding new qualifying BETC projects amidst a general culling of the program indicates that the Oregon legislature is not done with BETC but is introducing short-term changes in preparation for a big rewrite of the program in the 2011 Legislative Session. What should the next legislature do? What role should the BETC program play in the next decade?

C. 2011 and Beyond

In examining the governor's report and the current legislature's vision of the program in House Bill 3680, a coherent vision of the future of the BETC program can be gleaned. The 2011 legislature should consider and address the following areas to make the BETC program more effective and useful in the future: (1) create a variable cap on program spending tied to market conditions, (2) institute a per-project cap, (3) implement a competitive bid process, and (4) focus on renewable energy equipment manufacturing.

First, the hard cap set for the next few years should be replaced with a variable cap based on certain market conditions. An overall cap is needed to provide the legislature with a reasonable expectation

131 *See* OR. ADMIN. R. 330-090-0140 (2010).

132 OR. ADMIN. R. 330-090-0140(1)(a)(A).

133 H.R. 3680.

of tax revenue and to curb past abuses. However, the legislature needs to be cautioned not to set the cap extremely low after 2012, thereby gutting the effectiveness of the program; the history of the BETC program shows that it took off only in the last decade after the ceiling was removed in 1999.[134] A variable cap would link the scope of the program to the growth of the energy market. The variable cap recommendations in the governor's report are sound and should be considered as a starting point. The report advocated a biennium cap based on a percentage of 1% to 4% of gross operating revenue of energy suppliers in Oregon.[135] Funding for the BETC program under this measure would rise or fall based on the growth of the renewable energy industry in Oregon—once the market matures, there is less growth and therefore less need for incentives.

Second, the 2011 legislature should also institute a per-project cap, based on the governor's report, to insulate the program from manipulative applicants. House Bill 3680 placed a cap on wind projects, but this reform should extend to the whole program. Alternatively, a simple return to the maximum total cap per applicant, which was removed in the 1999 legislative session, would be a better move.[136] A per-applicant cap would prevent billion-dollar projects from being able to exploit the higher $200 million cap and would allow for more competition from smaller businesses for BETCs.

Third, no matter what type of cap is used, it is imperative that the legislature implement a competitive bid process to ensure that credits from the reduced pool go to projects with the most potential to create jobs or generate the most energy. The governor's report considers the possibility of adopting a competitive bid process in future legislative sessions,[137] and the new administrative rules enacted after House Bill 3680 have implemented a form of competitive bidding.[138] The report and temporary measures lead the way for a more fully implemented system. If a public competitive bid process were implemented for the BETC program, it would have two benefits. First, taxpayers and legislators would know where their tax expenditures are going and what benefit is being derived from them. Second, together with the ODOE's new clawback procedures, BETC applicants would submit

134 *See supra* notes 27–28 and accompanying text.

135 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 7.

136 *See supra* note 27 and accompanying text.

137 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75.

138 *BETC—Renewable Energy Projects*, *supra* note 114.

for certification only viable, cost-effective projects that are competitive with other businesses and could be completed on time. A competitive bid process would restore the public's confidence in the BETC program and could be easily implemented based on the ODOE's existing bid process used for facility siting.

Finally, the legislature should focus the future of the BETC program on a new renewable equipment manufacturing project. In 2008, the manufacturing program received only 9% of the total tax credits administered that year.[139] In the interest of growing a lasting green economy in Oregon, however, no other industry is more important than manufacturing, which can create a large number of much needed living-wage jobs to supplement the waning Oregon semiconductor manufacturing industry. The 2009 legislature changed the cap for individual manufacturing projects to $40 million, which under the 50% credit rate would allow for a whopping $20 million tax credit. But with 9% of all credits granted, the focus on credit size is erroneous. A direct subsidy for worker training of up to the same $10 million per project amount would be a better value than pass-through cash and give both the company and the State of Oregon a larger pool of educated workers trained in cutting-edge renewable technologies. In the context of a green economy, trained workers can be the most important tools. No matter what new policies are implemented in the renewable energy equipment manufacturing area, House Bill 3681, introduced concurrently with House Bill 3680, proposes a study for determining processes to transfer the renewable energy equipment manufacturing program from the ODOE to the Oregon Business Development Department, likely giving the program greater visibility and significance.[140]

CONCLUSION

Even though all measurable economic and environmental studies demonstrate how successful BETC is, the program is fighting for survival. Examining the thirty-year history of the BETC program shows that the original idea of the program has little to do with the budget-busting behemoth it has become. The recent efforts of the Oregon legislature to curtail the program's growth and focus spending on more viable, job-creating efforts is sound, but a balancing act must take place to ensure that businesses do not forsake Oregon due to

139 BUSINESS ENERGY TAX CREDIT 2010 RECOMMENDATIONS, *supra* note 75, at 2.

140 H.R. 3680, 75th Legis. Assemb., Spec. Sess. (Or. 2010).

incentives in other states. At the same time, voters are subject to the whims of the moment, so increased public relations and visible accounting practices are also necessary to increase public support. Of course, much of BETC's outlook depends on national and global externalities that are outside of Oregon's control.

The ultimate measure of appropriate funding and usefulness of the BETC program depends on future trends in renewable energy technology. A long-term upswing in the price of fossil fuels would cause the widespread usage of renewable energy to become more economically viable, which would reduce the need for direct subsidies and incentives. Existing energy suppliers will continue to search for more renewable energy sources with or without a tax incentive due to Oregon's Renewable Portfolio Standard.[141] A federal cap and trade program would further depress the need for aggressive state incentives to produce renewable energy.

However, one thing that will not change for Oregon is the need to create a new economy, a new brand, and a new reason for families and businesses to invest in Oregon's communities. The BETC program offers a compelling and workable process for Oregon to grow a world-leading green economy. From the European Union to China to Oregon, the future of energy generation is in renewable systems of a hundred forms. Oregon will not lead the world in the amount of energy generated, but it can lead the world as an international center of renewable energy equipment manufacturing and research. Changing Oregon's past focus from the natural resource exploitation of the timber industry to the producer of the world's renewable resource equipment manufacturers will bring Oregon to the forefront of the new global economy.

141 *See* S. 838, 74th Legis. Assemb., Reg. Sess. (Or. 2007).