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COMPREHENSIVE ENERGY STRATEGY

By: Kevin E. McCarthy, Principal Analyst

You asked for a summary of the Department of Energy and Environmental Protection's (DEEP) Comprehensive Energy Strategy.

SUMMARY

DEEP issued the final Comprehensive Energy Strategy in February 2013. The strategy presents a series of policy proposals intended to expand energy choices, lower utility bills, improve environmental conditions, and create clean energy jobs. It focuses on five, sometimes overlapping, energy strategy sectors: energy efficiency, natural gas, electricity, industry, and transportation. Although the strategy contains significant research findings, this report focuses mainly on the recommendations proposed as a result of those findings within each sector.

For energy efficiency, which the strategy identifies as the most cost effective way to reduce energy bills, the strategy recommends improving funding for efficiency programs and expanding the programs to include more potential customers.

Sandra Norman-Eady, Director
Phone (860) 240-8400
FAX (860) 240-8881
http://www.cga.ct.gov/olr

Connecticut General Assembly
Office of Legislative Research

Room 5300
Legislative Office Building
Hartford, CT 06106-1591
Olr@cga.ct.gov

In discussing the natural gas sector, the strategy concludes that natural gas is a cheaper, cleaner, and more reliable fuel for heating, power generation, and possibly transportation. It recommends a variety of proposals intended to encourage (1) people to convert their homes and businesses to natural gas and (2) gas utilities to expand their infrastructure.

The recommendations for the electricity sector similarly stress the importance of efficiency measures, but also propose measures to reduce electricity use, promote and expand renewable energy systems, and increase system reliability. Recommendations for the industry sector generally focus on adapting the gas, efficiency, and electricity proposals to the specifics of industrial needs, but also include suggestions to encourage water conservation and create an Advanced Energy Innovation Hub.

The strategy's recommendations for the transportation sector focus on reducing the amount of gasoline and diesel fuel consumed in the state while encouraging the availability of a diverse refueling infrastructure.

Among the changes from the draft strategy are provisions:

1. reflecting newly adopted energy efficiency initiatives;

2. using updated Department of Energy fuel price forecasts, which reduces the gap between projected oil and gas prices, thereby affecting a number of proposals in the strategy's gas recommendations;

3. reducing the number of "low-use" gas customers the strategy estimates would convert to gas for heating; and

4. recommending that the General Assembly adopt a 15 part per billion standard for the sulfur content of home heating oil to save oil customers money and capture significant environmental benefits.

The final strategy also has several new recommendations, notably on moving current standard service customers to competitive suppliers, creating a tax incentive for converting heating systems from oil to gas, and requiring an analysis of utility cybersecurity.

This report also identifies recommendations in the strategy that are included in pending legislation. This includes HB 6360, "An Act Concerning Implementation of the Comprehensive Energy Strategy,"

currently before the Energy and Technology Committee (OLR Report 2013-R-0147 analyzes this bill) and SB 843, "An Act Concerning Revenue Items to Implement the Governor's Budget," currently before the Finance, Revenue and Bonding Committee (OLR report 2013-R-0169 analyzes this bill).

BACKGROUND

PA 11-80 required DEEP, in consultation with the Connecticut Energy Advisory Board (CEAB), to develop a comprehensive plan (which DEEP calls a strategy) that incorporates existing energy efficiency and renewable energy plans. Among other things, the act required the plan to include:

1. an assessment and plan for all energy needs, including electricity, heating, cooling, and transportation;

2. the findings of the integrated resources plan, which seeks to meet future electric demand through a mix of efficiency and supply resources;

3. an assessment of energy supplies, demands, and costs, and factors likely to affect them;

4. long-range energy policies to achieve a sound economy and the least-cost mix of energy supply sources and measures that reduce energy demand, while also considering such factors as price impacts, public health, and environmental goals; and

5. recommendations for administrative and legislative action.

The act requires the Public Utilities Regulatory Authority (PURA, formerly the Department of Public Utility Control) to provide input on the proposed plan's impact on ratepayers, and allows a 45-day public comment period. Once finalized, the act requires the DEEP commissioner to publish the plan electronically and summarize all public comments and any changes that resulted from them.

The act requires the commissioner must submit the plan to the General Assembly's committees on energy and the environment. He can subsequently modify the plan in consultation with CEAB under the same procedures the act required for the initial plan.

ENERGY EFFICIENCY

According to the draft strategy, investing in energy efficiency measures is one of the most cost effective ways to reduce energy bills that annually total $8.1 billion state-wide to heat, cool, light, and provide hot water for buildings. The strategy calls for a substantial expansion in ratepayer funding for efficiency. The strategy's other recommendations for increasing energy efficiency focus on:

1. improving conservation and load management programs,

2. leveraging private capital to support efficiency investments,

3. developing a strategy to help low-income customers make efficiency improvements,

4. enacting regulatory changes to expand efficiency opportunities, and

5. fostering a market for energy efficiency products and services.

The strategy calls for an expanded commitment to all cost-effective energy efficiency through programs that:

1. reach all sectors and all buildings, with special focus on groups that have not been fully reached in the past, such as small businesses and the low-income community;

2. go beyond a traditional focus on lighting and building sealing to deliver deeper efficiency by such means as replacing heating equipment;

3. leverage private capital through innovative financing mechanisms including the Clean Energy Finance and Investment Authority (CEFIA) and the state's new Commercial Property-Assessed Clean Energy (C-PACE) program;

4. reinvigorate and broaden the existing Home Energy Solutions program to ensure that additional ratepayer funds achieve maximum reach and impact with metrics to ensure ongoing performance improvements;

5. promote efficiency goals through rate decoupling and other measures;

6. establish building efficiency standards for new construction and retrofits;

7. benchmarking building efficiency and disclosing efficiency scores at the time of rental or sale; and

8. use information technologies such as advanced meters to promote energy efficiency.

Efficiency Funding

The strategy finds that while Connecticut has increased funding for gas and electricity efficiency programs, the current levels cannot meet the law's cost-effective efficiency goal. Funding also falls short of demand. It also notes that the state has no dedicated funding mechanisms to support heating fuel oil efficiency efforts.

In 2011, annual ratepayer funding of electric efficiency reached $124 million, while annual funding for gas conservation was $17 million. In June 2012, DEEP issued an Integrated Resources Plan (IRP) that called for increasing efficiency funding to help mitigate the impact of a projected increase in electricity rates after 2017. According to the IRP, increasing the budget for electric efficiency programs from $105 million to $206 million annually would allow Connecticut to achieve all cost-effective efficiency savings, offset expected increases in electricity consumption, and reduce electric use. In July 2012, DEEP approved an expanded budget for electric efficiency programs that recommended PURA establish a conservation adjustment mechanism to collect additional ratepayer funds to increase the overall budget for electric efficiency programs by $34.2 million in 2012. PURA is considering this recommendation.

In January 2012, PURA authorized doubling gas efficiency program budgets from $17 million to $34 million annually; however subsequent decisions prevented this from going forward. The strategy estimates, based on Massachusetts and Vermont studies, the comparable level of investment needed to place gas and oil efficiency programs on a par with all cost-effective electric programs would be about $120 million annually.

The strategy argues that funding all cost-effective conservation would reduce energy use by up to approximately 20% and spending by residential and business customers by roughly $13 billion by 2022, producing net savings of $8 billion. It recommends increasing the annual funding for electric efficiency programs to $206 million and initially increasing funding for gas efficiency at $34 million, increasing to $75 million annually over the next few years.

The strategy also recommends the state ensure that its energy efficiency programs address all fuels and provide the funding needed to include homes using oil and other deliverable heating fuels. According to the strategy, the most logical way to achieve this might be for the oil and propane dealers to establish a voluntary efficiency fund that they would contribute to at levels commensurate with the funding provided by gas- and electric-heated homes. Alternatively, the strategy suggest the legislature might choose to levy a surcharge on oil and propane to support efficiency measures for customers heating with these fuels.

Conservation and Load Management Programs

The strategy assesses the strengths and weaknesses of existing efficiency programs, and makes recommendations designed to expand their reach. It finds that the primary residential program (Home Energy Solutions) and other efficiency programs are not structured for optimal results. For example, it notes that in the residential sector about 75% of the energy savings realized result from air sealing and the installation of efficient lighting and that only about 10% of the residential customers who receive home energy services through the Home Energy Solutions program actually install some of the recommended deeper‖ measures, such as replacement heating equipment.

The strategy suggests that existing efficiency programs be revamped to encourage contractors and vendors to promote the maximum amount of residential efficiency (i.e. measures beyond lighting changes and air sealing that are most commonly implemented at this time). These steps could include rewarding contractors and vendors who successfully promote these “deeper” efficiency measures and developing a licensure standard for contractors participating in the Home Energy Solutions (HES) program. It also recommends that existing and new efficiency programs be evaluated using consistent metrics to drive innovation to reduce costs, spur participation, and extend the programs’ reach.

Leverage Private Capital to Support Efficiency Investments

The strategy argues that the best way to ensure consistent funding for energy efficiency is to diversify its revenue sources and ensure that those who fund efficiency programs reap the benefits of these investments. It describes a new CEFIA residential program that will go into operation in February 2013. Under this pilot program, participating Connecticut banks and credit unions will provide unsecured loans of up to $25,000 to qualifying residential borrowers to finance comprehensive energy assessments and efficiency retrofits, in addition to qualifying renewable energy improvements and fuel and equipment conversions. The program will offer low interest rates and will allow the loan to be paid back in five to 12 years based on the energy savings.

The strategy recommends that, in order to reduce interest rates, PURA consider authorizing (1) utility service to be terminated for program participants who are delinquent on their loans or (2) allowing the loan to remain with the meter so that the loan obligation, as well as the benefits from the energy efficiency measures, transfers to the new owner if a property is sold.

The strategy also recommends that municipalities pass resolutions enabling them to work with CEFIA in the C-PACE program created by PA 12-2. This tax-lien financing program will allow certain commercial property owners to finance qualified energy efficiency improvements on their properties through an additional charge on their property tax. According to the strategy, C-PACE will allow low interest financing to be raised from the private sector with no government financing because repayment is tied to the property tax. For additional information on the C-PACE program see OLR Report 2012-R-0464.

Low-Income Strategy

The strategy offers several suggestions to expand the use of energy efficiency measures by helping ensure that low-income residents can participate in the state's energy efficiency programs. These include:

1. developing a program to support "pre-weatherization" measures addressing health and safety code violations (e.g. asbestos removal) in older buildings that often prevent owners from participating in efficiency programs,

2. incorporating energy efficiency measures into state-administered housing upgrades,

3. improving existing means-tested energy assistance programs,

4. developing efficieny programs to address "split incentives" where a building's owner does not pay for its utilitites, and

5. expanding outreach and financing options for businesses in low-income communities.

Regulatory Changes to Expand Efficiency Opportunities

Because utilities traditionally make more money by selling more electricity or gas, they have little financial incentive to promote energy efficiency measures. The strategy recommends "decoupling" utility revenues from their sales volume to remove this disincentive and replacing it with performance incentives or a performance-based return on equity to create an incentive to boost efficiency. HB 6360 includes the decoupling proposal.

The strategy also advises the state to (1) adopt and enforce the latest codes and standards to ensure high-performance buildings, (2) provide adequate resources to train local building inspectors on the new codes, and (3) continue to adopt improved appliance standards.

Foster a Market for Energy Efficiency

The strategy proposes a coordinated new efficiency outreach initiative to help households and businesses understand available energy options, as well as new business models for delivering energy efficiency. Launched in February 2013, the initiative's website (EnergizeCT.com), provides information about efficiency programs, financing opportunities, and the benefits of investing in efficiency and clean energy. The strategy also recommends developing a voluntary residential building energy labeling pilot program. Participants would receive a label or information sheet summarizing a building's energy efficiency that could be included as part of the disclosure when selling the building. The label could help buyers make more informed decisions and potentially reward sellers for having made energy efficiency improvements in their property by increasing its value. HB 6360 contains a related proposal.

NATURAL GAS

Over the last several years, the emergence of new extraction techniques (most notably hydraulic fracturing or "fracking") have brought enormous amounts of gas supply to the marketplace from shale basins, including the Marcellus formation in the Northeast. As a result, the price

of gas is well below that of heating oil on an energy-equivalent basis. According to the strategy, gas is currently 60-75% cheaper than fuel oil, 70-80% cheaper than propane, and 75-85% cheaper than electric resistance heating.

While DEEP acknowledges that there are significant environmental and public health issues associated with the drilling and transport of gas, it argues that the development of these gas resources allows gas to serve as a cheaper, cleaner, and more reliable fuel for heating, power generation, and perhaps transportation.

Promoting Natural Gas Use and Fuel Switching

The strategy states that only 31% of Connecticut homes currently heat with gas. The percentage of commercial and industrial entities with access to gas is only slightly higher. The strategy proposes to make gas available to as many as 305,000 additional Connecticut homes and businesses, beginning with the roughly 217,000 customers who are on gas mains now but not heating with gas.

The strategy calls for establishing a planning process for gas expansion that:

1. raises customer awareness of the opportunities for fuel-switching,

2. makes efficiency investments and fuel switching affordable through financing and incentives for choosing the most energy efficient equipment,

3. enacts regulatory changes to broaden the reach of financing options the utilities may provide;

4. reduces the costs of off-main expansion by streamlining permitting and siting processes and coordinating main extensions with the construction of other underground utility infrastructure,

5. offers training and assistance to employees and businesses harmed by gas expansion,

6. creates a range of fuel-saving options for customers unlikely to convert to gas and for those choosing not to do so, and

7. amends Connecticut's regulatory accounting to reflect a 25- year horizon for determining whether all ratepayers should pay system expansion (the hurdle rate) and account for non-energy (or societal) benefits of fuel switching.

Among other things, the strategy specifically proposes that:

1. the gas companies jointly file a seven-year plan with DEEP and PURA, based on an expanded cost/benefit analysis, to expand the rate of natural gas conversions in a way that targets cost-effective potential on- and off-main customers;

2. low- or no-interest loans be offered for high efficiency heating and domestic hot water systems and customers be allowed to finance conversions on their utility bill over time;

3. the state provide a tax credit to encourage customers who are not on gas mains to sign a contract with their gas company to convert to natural gas;

4. the gas companies and gas efficiency fund programs encourage all homes considering conversion to gas to participate in the Home Energy Solutions program and that any customers who convert pay the same costs and receive the same efficiency program benefits as other gas customers;

5. PURA allow new customers to pay their share of the cost of main extensions over time through payments on their gas bill, instead of requiring an upfront payment;

6. PURA consider establishing a way for gas companies to recover their prudent investments in system expansion outside of a rate case;

7. gas companies be allowed more flexibility in calculating new revenues in the hurdle rate test when projects are analyzed, allowing revenues from prospective customers to be included;

8. the General Assembly consider ways to secure funding from fuel oil and propane customers over the next three years to provide fuel oil and propane efficiency programs to them that are comparable to the programs offered to electric and natural gas customers; and

9. the General Assembly adopt a 15 part per billion standard for the sulfur content of home heating oil to save oil customers money and capture significant environmental benefits.

Costs and Benefits of the Proposals

The strategy's estimates of the costs of the fuel switching initiatives include the costs of replacement heating equipment (which it estimates would cost the average residential customer $7,500), service lines and meters to serve new customers, and gas main extensions. It estimates that the total costs would be approximately $5.2 billion. At one point in the strategy, DEEP estimates that the proposals would result in $2.8 billion in net present value (the discounted value of benefits minus costs) over 20 years, with the great majority of the value (90% or $2.6 billion) coming from converting residents and businesses that are on or near existing mains to gas. However, later in the same chapter, using updated energy price forecasts, DEEP reduces the total net present value to $1.8 billion and finds that the net present value for fuel switching for the group of potential customers who are further from the existing mains would be negative. The difference is due to the fact that the updated forecast projects somewhat lower oil prices than the earlier forecast, while the projected gas prices remain about the same.

This change makes much of the gas main expansion contemplated in the strategy economically non-viable using current cost rules, unless the prospective customers are willing to contribute to the cost. SB 843, "An Act Concerning Revenue Items to Implement the Governor's Budget," currently before the Finance, Revenue and Bonding Committee, includes a tax credit for gas companies to cover part of the cost of converting households and business that are more than 150 feet from existing mains. The credit apparently would cover part of the cost of the main extension, thereby reducing the prospective customer's contribution.

In addition to its economic benefits, the strategy argues that fuel switching would bring environmental gains, lowering emissions of federally regulated pollutants such as sulfur and nitrogen oxides, particulate matter, and carbon dioxide.

Potential Risks

While this analysis shows economic benefits for expanding gas use, DEEP acknowledges the risks involved in a large-scale conversion strategy. Gas prices could rise unexpectedly as more electric generation switches from coal or oil to gas. An expansion in gas exports could redirect United States gas supplies to markets in Asia and Europe where

gas prices are much higher, driving up the price of gas here. Additionally, reserves could prove more difficult to access than currently thought. Fuel consumption could drop because of the investment of energy efficiency measures called for in the draft strategy, reducing the potential savings from gas conversion. Potential negative environmental impacts from "fracking" such as groundwater contamination, methane leakage, or other damage to the environment or public health could require regulatory changes in the areas where gas is produced and slow the pace of drilling and drive up the costs of gas.

For a more detailed discussion of potential benefits, costs, risks, and uncertainties of promoting gas use in Connecticut, see OLR Report 2012-R-0478.

ELECTRICITY

While the cost of electricity in the state has decreased by 12% since 2010 and gas-fired power plants have largely displaced older coal and oil-fired facilities, the strategy offers numerous recommendations intended to make the state's electricity sector less expensive, environmentally cleaner, and more reliable. Some, such as expanding efficiency program funding and decoupling electric company rates, have been summarized in the above section on efficiency recommendations.

Peak Demand Reductions and Time-of-Use Pricing

The strategy recommends increasing public awareness about peak demand reduction programs, which generally provide incentives for larger customers to reduce their electricity demands when the overall demand for electricity is at its greatest. It calls for the state to invest in technology that will help smaller customers to participate.

The strategy also recommends expanding time-of-use pricing and other dynamic rate mechanisms that create a financial incentive for customers to reduce their electricity usage during peak demand hours. These pricing systems, which increase a customer's rates during periods of high demand, require advanced metering capabilities. While the meters of United Illuminating (UI) customers currently have these capabilities, Connecticut Light and Power's (CL&P) meters do not.

To address the metering difference in the two utilities, the strategy recommends that CL&P submit a plan to PURA for a multi-stage rollout of advanced meters that minimizes stranded costs, prioritizes adoption by customers most likely to benefit from their use, and offers hybrid rate structures for customers who choose not to participate. It recommends that CL&P not promote time-of-use rates to its residential customers until the advanced meters are available.

Since UI already has advanced metering capabilities and, in some instances, time-of-use rates, the strategy recommends UI promote time-of-use rates to all of its residential and small business customers.

Virtual Net Metering

Current law allows municipalities to engage in virtual net metering, in which they receive an electric billing credit they can share among related accounts when their class I renewable generation facilities generate more power than the billed account uses. The strategy recommends that these provisions be expanded to include agricultural as well as governmental entities, crediting all customers with 80% of the distribution charge, and lifting the cap on maximum system subsidy for this provision from $1 million to $10 million per year. It further recommends that governmental entities be allowed to designate up to five non-governmental beneficial accounts that are defined as critical facilities (e.g., key facilities in municipal centers).

Submetering

Current law specifically allows submetering at campgrounds and marinas. To help encourage the installation of renewable energy at multi-tenant commercial and residential buildings, the strategy recommends that PURA establish rules to enable submetering generally, with appropriate consumer safeguards. The strategy specifically recommends that submetering be made available in multi-tenant buildings that are served by distributed power generation or CHP systems.

Work with Municipalities to Decrease In-State Renewable Costs

The strategy recommends that the state and municipalities work together to streamline permitting, siting, and other requirements to help reduce the costs of solar photovoltaic installations that are not directly related to equipment and installation (i.e., the "soft costs"). It also suggests expanding CEFIA's Solarize program which pools solar installation jobs, thereby allowing contractors to reduce the cost of acquiring customers by bidding on a larger quantity of installations at one time.

Engage in Regional and Federal Regulatory Processes

The strategy recommends that DEEP's Bureau of Energy and Technology Policy increase the state's engagement with the Federal Energy Regulatory Commission and ISO-New England, the federal entities which regulate the electricity transmission system, on issues such as (1) aligning markets and planning, (2) the region's increased reliance on gas for electricity production, and (3) ensuring that electricity markets provide participants with only the level of incentives needed to ensure an adequate level of supply.

Strengthen the Regional Carbon Dioxide Cap

In 2008, Connecticut joined eight other states to implement the Regional Greenhouse Gas Initiative , the nation's first mandatory carbon dioxide cap and trade program. Because regional emissions have been significantly lower than the current regional carbon dioxide cap, the strategy recommends that the state work with other states to adjust the cap to ensure the program continues to incentivize better environmental outcomes. Its suggestions include lowering the emissions cap, requiring periodic compliance checks, and ensuring that the state's proceeds are put to their best use through cost benefit analysis.

Develop and Deploy Microgrids

The strategy recommends following up on the microgrid pilot program created by PA 12-148 to identify successes and difficulties and craft recommendations for a larger program. For additional details on the microgrid pilot program, see OLR Report 2012-R-0417.

Implement the Reliability Recommendations of the Two Storm Panel

Although many of the Two Storm Panel's recommendations have been implemented, the strategy recommends that DEEP additionally investigate the physical and fiscal issues associated with developing distributed power generation in critical areas and town centers. This would include reviewing energy improvement districts, use of microgrids, and potential legislative fixes to address rights-of-way issues.

The strategy also suggests that DEEP follow-up on the recommendations of the Geospatial Information Systems (GIS) Council Storm Response and Recovery Assessment Group to require electric utilities to develop GIS applications incorporating information from advanced meters, grids, and mobile data terminals to facilitate real-time sharing of data on service outages.

Evaluate Options for Waste-To-Energy

The strategy recommends a study on the viability of the state's waste-to-energy facilities, which have been facing reduced revenues, unsold renewable energy credits, and increased costs.

Cybersecurity

The strategy recommends that PURA, working with other relevant agencies, review Connecticut's electricity, natural gas and major water companies to assess the adequacy of their capabilities to deter interruption of service. An unclassified report of the review together with recommended actions to strengthen deterrence should be presented to the Governor and General Assembly by September 1, 2013.

Transition Current Standard Service Customers to Competitive Suppliers

This Strategy proposes that remaining standard service customers be moved to the competitive marketplace. DEEP and PURA should work together to divide standard service customers into tranches of 100,000 and make them available to the retail electricity supplier market, with the customer tranches being awarded to the highest bidder and the proceeds going to Connecticut taxpayers.

To assure that the transitioned customers save money on their electric bills, the winning suppliers would be required to guarantee that their rates for one year would be at least 5% below the utility standard offer on the date of the transaction. In addition, the transitioned customers must be allowed to return to standard service or to choose a different retail electricity supplier if they wish, with appropriate market information provided to these customers in coordination with PURA. This action could begin in 2013, with the transfers taking effect in 2014.

INDUSTRY

The strategy discusses six proposals ultimately aimed at helping the state's industrial customers reduce current energy costs, stabilize future energy costs, improve competitiveness, and reduce environmental impacts. The proposals focus on:

1. reducing electricity rates and costs, in part by informing customers who buy power from electric companies of their potential savings by choosing a supplier

2. reconfiguring energy efficiency programs and developing programs to specifically address saving energy in industrial processes,

3. enabling fuel switching,

4. removing barriers to combined heat and power (CHP) use,

5. encouraging water conservation and

6. creating an Advanced Energy Innovation Hub through UConn.

Reduce Electricity Rates and Costs

Because electricity costs can often be a significant part of an industry's operating expenses, the strategy recommends steps to ensure that the state's industrial customers gain the benefits of decreasing electricity prices. In particular, it suggests further efforts to educate industrial customers on the price benefits of switching to a competitive retail electric supplier, instead of their local utility.

Reconfigure Energy Efficiency Programs to the Needs of Industry

The strategy notes that reducing industrial electricity consumption would be one of the most productive ways to lower costs for the state's companies. To that end, it recommends adjusting energy efficiency

programs to focus on industry needs. In particular, it suggests expanding funding for the Process Re-engineering for Increased Manufacturing Efficiency (PRIME) program, which provides lean manufacturing training that promotes energy savings through productivity increases.

Enable Fuel Switching to Cheaper and Cleaner Fuels

The strategy recommends the state (1) promote opportunities for commercial and industrial customers on existing gas mains to switch to gas and (2) authorize utilities to extend the system for "off main" customers when the cost benefit of conversion is positive. Greater details on the conversion recommendations are discussed in the strategy's section on gas.

Remove Known Barriers and Refine Combined Heat & Power Strategy

According to the strategy, CHP systems, which capture and use the heat generated in a facility's power plant, can offer an industry significant savings on electricity and heating expenses. To more fully capture potential CHP benefits, the strategy recommends expanding the CHP incentive program administered by DEEP to allow larger projects to participate. Under current law, the DEEP program is limited to projects under 1 megawatt. Changes to the program's size limits would have to be made legislatively.

Encourage Water Conservation

To promote water conservation and efficiency, the strategy recommends that PURA establish water rates that encourage conservation (similar to the decoupling recommendation for electric companies). It also recommends that the legislature increase the Water Infrastructure Conservation Adjustment (WICA) surcharge from 5% to 10% to allow water companies to better repair and replace aging and inefficient infrastructure. (HB 6360 contains related proposals),

Launch an Advanced Energy Innovation Hub

The strategy recommends that DEEP and UConn launch an Advanced Energy Innovation Hub to develop energy technologies. DEEP will provide a portion of the hub's funding for the first four years and the university will match this support and seek additional sources of funding. Research will initially focus on fuel cells, microgrid engineering, batteries and storage, and small-scale hydropower.

TRANSPORTATION

According to the draft strategy, the transportation sector accounts for 32% of the state's total energy consumption and oil in the form of gasoline and diesel fuel comprises 95% of the energy used by the sector. This dependence leaves the public exposed to price spikes caused by global markets beyond the state's influence. The sector also produces about 40% of the state's greenhouse gas emissions.

The strategy argues that reducing the amount of gasoline and diesel fuel consumed by Connecticut cars and trucks would bring significant economic benefits, notably, potential lower costs and fewer dollars shipped overseas. In addition, reducing consumption of these fuels would have environmental and public health benefits, including improved air quality and lower greenhouse gas emissions.

The strategy promotes the development of a diverse infrastructure for cleaner fuels and the accelerated adoption of high-efficiency and alternative fuel vehicles. Among other things, it recommends that PURA:

1. use firm rates to price natural gas vehicle fuel rather than linking the price to gasoline, so that consumers can benefit from natural gas vehicle fuel savings;

2. adopt time of use rates for electric vehicle charging to enable off-peak recharging, which will lower costs and minimize impact on the electric grid and air quality;

3. adopt a tariff for public use of charging stations owned or operated by an electric company.

In addition, DEEP will collaborate with other state agencies to support municipal efforts to (1) build walkable, bikeable, transit-oriented communities and (2) implement strategies that are consistent with the statutes and the growth management principles in the draft Plan of Conservation and Development.

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