DSM Spotlight

The Newsletter of the International Energy Agency Demand-Side Management Programme December 2007

DSM on the Rise

While liberalization has certainly changed the landscape for DSM advocacy and implementation, the need for DSM remains, and is growing due to climate and environmental issues. From a technical point of view, it is still the same old story—the need to change the load shape (peaks and valleys) and the load level (conservation and growth). In the past this was done primarily by the utilities, based on their needs (and wishes), who were keen to get a flater and more predictable load curve. In some countries, the utilities were later tasked to deliver energy efficiency as an alternative to supply side resources.

Today, the main drivers are to serve societal needs, customer services and climate policies. And the objectives are to keep the energy system working, to prevent black-outs and to shift from carbon-fat to carbon-lean systems, as illustrated in Figures 1 and 2.

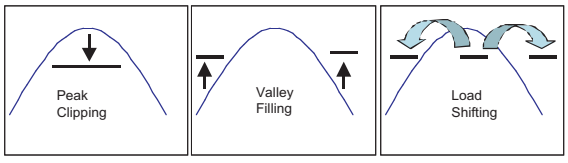

Figure 1. Load Shape changes *(to adapt to system capacity).*

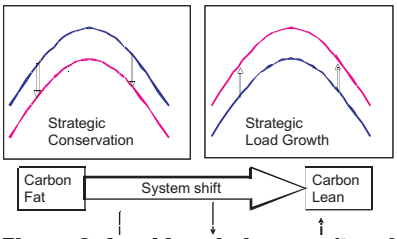

Figure 2. Load Level changes *(to adapt to environmental needs).*

This shift to carbon-lean systems should certainly benefit from DSM measures. A market survey conducted by McKinsey for several stakeholders shows that many measures for reducing carbon emissions not only will save money, but are well suited to be treated as DSM by utilities and other actors. Unfortunately, these actions won't happen by themselves and either regulation or someone is needed to create a business opportunity. Under pressure to economize shrinking fuel supplies and combat climate change, both Europe and the United States have launched "directives" and "recommendations" to encourage DSM actions on national and state levels in lieu of regulations.

New Actors & Technologies

In the traditional DSM business, the utilities were the main actors responsible for developing a "level playing field" for supply and demand. This has changed due to the liberalization of the energy market, however, utilities still have a critical role to play. In both government directives and recommendations in Europe and the U.S. there are specific functions outlined for utilities.

- Funding in both traditional ways (by taxation; public benefit charges; levies) but also with more developed mechanisms as in the case of certificates, commitments or standards where an obligation put on the utility can be procured and/or traded.
- Facilitating services for more advanced metering, billing services and pricing to allow greater flexibility.
- Services development with more active involvement in dissemination of products.

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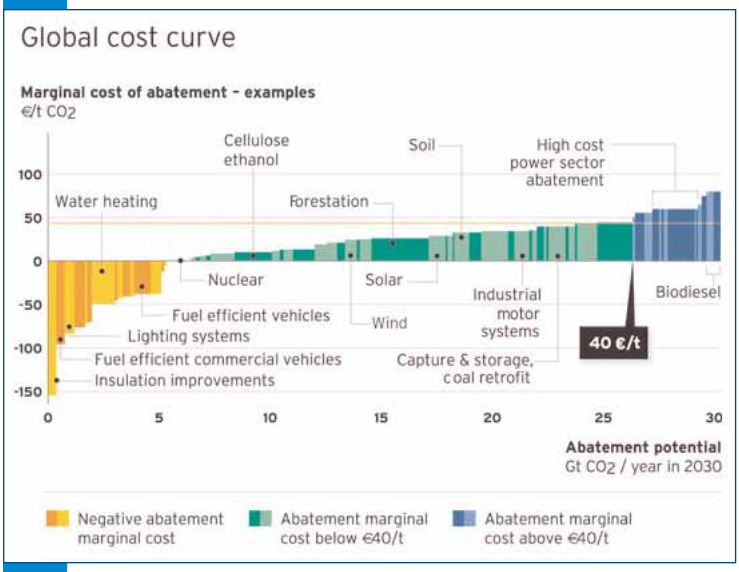
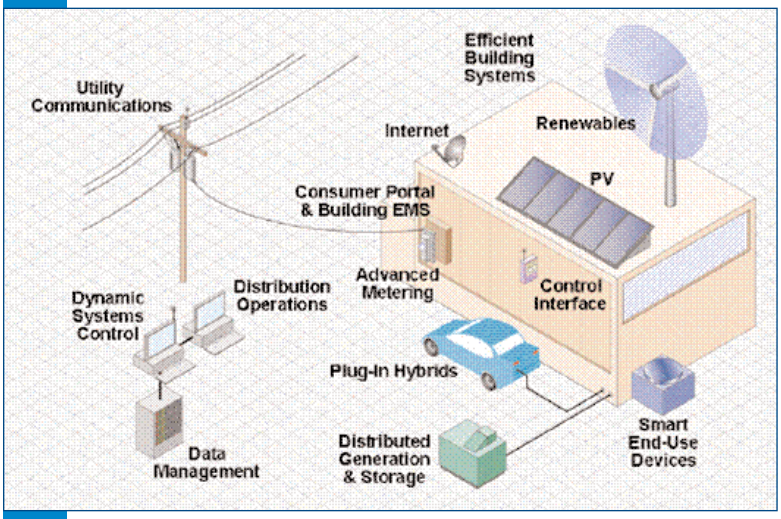
DSM on the Rise *continued from page 1*



Marginal Abatement Cost Curve for Buildings 2030 (Global) *(Source: Vattenfall AB)*



New Technologies

(Source: An EPRI Initiative to Advance the Efficient and Effective Use of Energy)

The new energy market structure also requires new actors to implement DSM. Municipalities have the opportunity to act as planners, regulators, building owners, and service and information providers. Energy Service Companies are needed to develop service concepts tailored to customer needs. And, manufacturers and installers are needed to market and to deliver EE technologies.

The development of services goes hand-in-hand with the development of new technologies that allow customers flexibility. For example, the trend to improve information technologies and to use smaller supply-side technologies such as PV, wind and micro-CHP opens the door for completely new system configurations.

Some traditional DSM problems may be solved with small-scale supply measures that manufacturing business can now provide. For example, distributed generation is possible for single-family housing and Demand Response can be used to balance the full integration of renewables into systems. Communication between customer and supplier as well as improved computerization will also enable both smart-grid services and smart appliances that are able to adapt to local circumstances and to present situations in load, pricing, congestion etc.

Policies & Their Impacts

To many on both the supply side and the demand side of business, this entire thinking is a "paradigm-shift," and one that will require support from governments. To achieve this shift, policies will need to be more explicit, for example:

Load Shape: Countries should develop a regulatory regime that appoints responsibility for resource adequacy in the electric systems, and when the regime allows, make demand side balancing service the prioritized option. The impacts of adopting such a policy include:

- Less price volatility by improving short term price elasticity.
- Improved system reliability by reducing peaks and adding to safety margins.
- Enhanced system security by reducing dependency on vulnerable supply resources.
- Improved restoration capacity by dispatching in/after emergency situations.
- Less costly network reinforcements since energy efficiency measures will be active alternatives.
- Distributed generation as alternative to transmission lines.
- Improved operation and use of flowing renewable sources.
- Elastic response as complement to competition (lack in number of companies and excess in market concentration).

Load Level: Countries should have a system for assessment of the least-cost delivery of energy services, which includes both the demand and supply side. Based on this, it should be decided how market actors can be engaged and

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DSM on the Rise *continued from page 2*

supported in the delivery of services. The impacts of adopting such a policy include:

- Development of markets for energy service companies and performance contracting.
- Allocation of commitments and obligations that mobilizes actors for large-scale energy efficiency actions (e.g., use of "White Certificates, public sector procurement, municipality initiatives, etc.).
- Organization and targeting of support programs for energy efficient products.
- Improved allocation of obligations for reduction of GHG emissions between sectors and countries.
- Improved use of market communication mechanisms, (e.g., standards and labels).
- Input to how further research and support mechanisms should be distributed among actors.

To support this paradigm shift, the DSM Programme continues to implement projects to tackle specific issues. Visit our web site to learn more about our current and past work at iea-dsm.org.

This article was contributed by the DSM Programme Chairman, Hans Nilsson, nosslinh@telia.com. FourFact AB, Sweden

EUROPE & US EE DIRECTIVES

Europe

The European Union has issued a directive on energy efficiency and end-use energy services in which the EU-member states are requested to issue new legislation. In this it will be required that:

- The public sector will set an example by improving energy efficiency in all their activities, and
- Utilities participate by financing and by developing services to customers.

Metering and billing should be more informative and energy audits should be offered to customers. One possible means could be development of "White Certificates" as an instrument.

Source: EU Directive on Energy Efficiency and End-Use Energy Services
http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_114/l_11420060427en00640085.pdf

United States

The U.S. Department of Energy, in a March 2007 report to the U.S. Congress, made 10 recommendations on how utilities can better encourage and promote energy efficiency with their customers. A national energy efficiency action plan has also been issued by the U.S. Environmental Protection Agency and in which the utility role on the market is outlined.

Source: State and Regional Policies that Promote Energy Efficiency Programmes Carried out by Electric and Gas Utilities
http://www.oe.energy.gov/DocumentsandMedia/DOE_EPAct_Sec._139_Rpt_to_CongressFINAL_PUBLIC_RELEASE_VERSION.pdf

task XVI

Innovative Finance Options for Energy Service Projects

Financing is key to the implementation of any energy service project. Traditional options such as credit do not always offer the optimal financing solution, and therefore should be compared to more innovative options, such as operation and finance lease agreements or forfeiting (selling of future receivables).

It is also necessary to determine who is best able to finance the project—the customer, an Energy Service Company, or a financial institution serving as a third partner. The experts in *DSM Task XVI, Competitive Energy Services (Energy Contracting)*, are looking at these finance options from the perspective of the ESCO and their customers (company, building owner, or public institution) who wish to lend money to finance energy efficiency projects.

The Task has introduced a comprehensive customer demand profile and broken down the analysis into:

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smart metering

Now or Later

Since deregulation of the electricity market and market driven pricing around the world, a means to match consumption with generation has been a challenge for regulators and utilities. Smart meters (meters with two-way communication to upload commands and download metering data) can provide an economical way to measure and track customer energy use, which in turn allows the generators to manage consumption based on the time of day and the season—that is save energy. The expectation of many in the field is that as the number of large-scale smart meter programs increases, the need to invest in new transmission distribution networks will decrease.

What Is A Smart Meter?
There is no definitive definition of a smart meter, however all smart meter systems are comprised of an electronic box and a communications link. At its most basic, a smart meter electronically measures how much energy is used and communicates this information to another device that then provides the customer with information on how much energy they are using and how much it is costing them.

A new wave of smart metering programs is rolling in as part of energy saving initiatives in many countries. This is happening despite some unanswered questions on how to guarantee a successful program for the business and the customer.

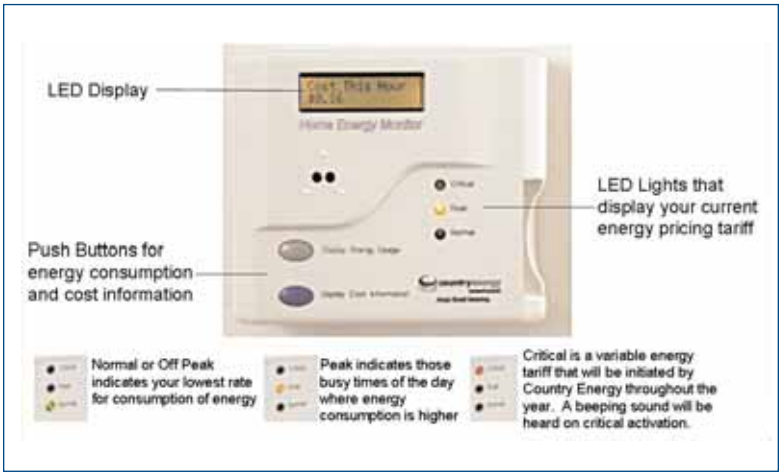
To create a dialogue and to exchange experiences of several European countries, a smart metering workshop was hosted by FPS Economy (Federal Public Service Economy) in conjunction with the October IEA DSM Executive Committee meeting in Belgium. Speakers from Belgium, Australia, Netherlands, Spain, U.K. and the European Smart Metering Alliance (ESMA) spoke about their experiences developing and implementing smart metering programs.

Three standard approaches are used to encourage people to change their energy use behavior:

- ***Information*** (e.g., publications, websites, energy information centers, energy audits, and energy labeling of appliances, equipment and buildings)
- ***Pricing*** (e.g., inclining block tariffs and time-varying pricing, such as Time of Use (TOU), critical peak pricing (CPP), and real-time pricing (RTP))
- ***Regulation*** (e.g., minimum energy efficiency performance standards (MEPS) for appliances, equipment and buildings)

A fourth approach is now being tested – smart meters. Studies suggest that rolling out advanced meters to all electricity consumers in a country could achieve, in a best case situation, savings between 4-10% in total national electricity use. However, questions still remain with the biggest unknown being how best to interact with the consumer, and ultimately how to change people's behavior. Installing a smart meter is not enough—the end-use customer must also understand how their behavior can change the amount of energy they use.

Conclusions from the workshop were as many as the different meters used throughout the world. The overarching conclusion, however, was that a smart meter is not enough, and that what is needed is a *smart system* (meters plus communication; software for calculation, billing and verification; pricing structure; institutional models; and storage to accommodate the data). As more countries launch smart metering programs



A sample smart meter. *(Source: Country Energy)*

continued on page 5

smart metering *continued from page 5*

the number of best practices grows for others to use to overcome specific barriers they are facing.

The DSM Programme is working in this area with two Tasks focusing on specific barriers. *Task XV, Network Driven DSM*, is researching the use of advanced metering and load control to support electricity networks. And, *Task XI, Time of Use Pricing and Energy Use for Demand Management Delivery*, analyzed End of Use Monitoring and Feedback, Time of Use Pricing and Demand Side Bidding for smaller customers. This Task will now focus on how ESCO businesses can provide Demand Response and Energy Saving Services for residential and SME customers. The key distinction between different smart meters is the way that they communicate— one-way or two-way communication between the energy supplier and the meter and whether the meter has data storage capability.

> "Smart metering is being pushed ahead by many European governments because of the EU's Energy Services Directive and a belief that this will help to liberalize energy markets. This is a very important time for all those who have been looking to exploit smart metering for energy efficiency and demand side management because the systems are being defined. ESMA is working with industry to ensure that the needs of energy efficiency and DSM are included when smart metering systems are set up."
>
> *John Parsons, ESMA (European Smart Metering Alliance)*

A smart meter can perform many functions including:

- Consumer information - electricity and gas consumption and cost, greenhouse gas emissions, historical consumption data for comparison, and current tariff and demand
- Automated and remote meter reading
- Remote connection and disconnection
- Outage and tamper detection
- Monitoring of power quality
- Remote time synchronization

To download the workshop presentations go to http://dsm.iea.org/Content.aspx?ID=7#ancBrugge.

task XVI *continued from page 3*

1. Direct financing cost
2. Legal aspects
3. Securities/collateral required
4. Taxation implications
5. Balance sheet & accounting implications
6. Business Management expenditures

On the financial supply side, Task experts have described properties of different finance offers (credit financing, operate and finance leasing, and forfeiting) with regard to the criteria introduced in the customer demand profile. This work will conclude by comparing the above financing offers with the customer demand, outlining their advantages and disadvantages and giving recommendations for the finance preparation.

A conclusion thus far is that any finance option requires a comprehensive look at the sum of all its business implications. And, the proposed customer demand profile offers this comprehensive perspective and may serve as a checklist to be adapted to the specific situation of the customer.

Another conclusion is that innovative financing options should be taken advantage of, which in return will require knowledgeable financing institutions. And, that for future development a "pure" forfeiting finance option based on selling the future project cash flow to an FI would be a very desirable from the customer perspective.

If you have questions or wish to participate in the work, please contact the Task's Operating Agent, Jan W. Bleyl at bleyl@grazer-ea.at.

This article was contributed by the DSM Task XVI Operating Agent, Jan W. Bleyl of Graz Energy Agency Ltd, bleyl@grazer-ea.at and Mr. Mark Suer of Raiffeisen Leasing GmbH, mark.suer@rl.co.at

india

India to Develop National Demand Side Management Roadmap

India is taking significant steps to promote DSM. In 2007, the country joined the IEA Demand Side Management Programme and joined two projects, *DSM Task XV, Network Driven DSM*, and *Task XVI, Energy Performance Contracting – Competitive Energy Services*. To promote DSM within the large number of state owned utilities, the Government's Bureau of Energy Efficiency (BEE) organized a two-day workshop titled, "National Workshop on Developing Demand Side Roadmap in India."

The importance being given to DSM activities by the Indian Government was underscored by the fact that the Honorable Minister for Power, Mr. Sushil Kumar Shinde, inaugurated the national roadmap workshop this past October. During his inaugural address, the Minister emphasized the need to undertake DSM and energy efficiency activities, particularly given the fact that India is facing a peak power shortage of about 14% and an energy shortage of 9%.

A study conducted by the Asian Development Bank estimates the DSM potential in India to be about 9,400 MW. And, the Integrated Energy Policy Report (IEPR) prepared by the Planning Commission, a leading planning organization in India, estimates the electricity demand reduction potential of DSM to be about 15% of the total electricity demand in the country. Because of the huge potential for reducing electricity demand using DSM measures and the poor energy resource endowment of India, the IEPR identifies DSM as a critical and a strategic element for enhancing the long-term energy security of India. However at this time, there is little experience in developing, implementing and monitoring DSM programs. The national workshop though has sowed the seeds of the DSM movement in India. And, using inputs received during that workshop, BEE is planning to develop a National Roadmap for DSM in India.

For more information please contact the Indian DSM Executive Committee member Mr. Devender Singh of the Ministry of Power, Government of India, e-mail: devendersingh@nic.in *or Mr. Balawant Joshi of ABPS Infrastructure Pvt Ltd, e-mail:* balawant.joshi@abpsinfra.com.

dsm.iea.org

Visit the DSM Programme's new web site for easy access to reports, news and contact information.

task XI

New Publications

Download these complete reports from the DSM website's Task Publications page – click on Current Tasks and then Task XI, Time of Use Pricing and Energy Use for Demand Management Delivery.

Subtask 1: Smaller Customer Energy Saving by End Use Monitoring and Feedback

Download this report and read about successful EUMF programs, what further measures can be implemented, whether EUMF has an economic role to play in current thinking for energy saving, and what motivates end use behavior changes.

One way to motivate customers to save energy is by identifying and presenting them with a breakdown of their individual end uses of energy, its cost and environmental impact–End Use Monitoring and Feedback or EUMF. This report summarizes Task work on determining how successful EUMF has been, what further measures can be implemented, and whether disaggregation and feedback have a viable role to play. The report concludes with an analysis of EUMF methods, costs and its impacts.

Subtask 2: Time of Use Pricing for Demand Management Delivery

Download this report and learn about the quantified potential, value, and cost of modifying smaller customer end use demands using TOU pricing.

Time of Use (TOU) electricity pricing is one mechanism for encouraging energy demand profile shape change. This is already a normal pricing, billing and settlement mechanism for larger customers, but is not generally used for smaller customers. This report presents the financial viability of implementing different Time of Use (TOU) pricing regimes by equating reliable and flexible demand shift with scheduled generation, transmission and distribution network construction costs. In order to do this, TOU pricing field trials were conducted in six European countries. And, the costs were estimated for implementing TOU pricing regimes per kW of demand shift and the ball park cost of new supply side construction. The report concludes with costs and benefits of TOU pricing and recommended actions.

Subtask 3: Demand Side Bidding for Smaller Customers

Download this report to understand the feasibility and viability of DSB for smaller customers.

Demand side bidding (DSB) is a mechanism enabling the demand side of electricity markets to participate in energy trading. This report investigates the feasibility and viability of DSB for smaller customers by analyzing activities in six European countries. Conclusions from field trials show that there is a positive attitude among many smaller customers to saving energy and money provided the inconvenience is small. DSB for smaller customers can be implemented using available communication technology, however, more cost effective solutions are needed if bidding small demands is to be viable in wide-scale markets. This report concludes by identifying potential barriers to implementing wide-scale DSB for smaller customers and recommended areas for further study.

Subtask 4: Quantify the Potential for Existing Profile Settlement Systems to Deal with Dynamic Demand Changes Resulting from Bidding Smaller Customer Demands into Markets

Download this report to learn about different solutions to accommodate Demand Response in profile settlement systems.

Profile settlement systems are used so that smaller customers can participate in supply markets without TOU metering. This study considers the impact on profile settlements of smaller customers participating in Demand Response and proposes solutions to identified problems. Profile settlement systems developed in the Netherlands, Spain, and the U.K. were analyzed for their potential to accommodate smaller customer demand profile changes resulting from Demand Response. Factors considered were the numbers of profiles in use, the way they are updated, variables used to modify profile shape to account for seasonal changes, and the introduction of embedded micro generation. The report concludes with recommended solutions and areas where more work is needed.

Subtask 5: Demand "Available" and "Turndown" Validation Mechanisms for Market Bidding of Smaller Customer Demand

Download this report to better understand DR validation and its implications.

Mechanisms are required to validate both that demand is "available" as a Demand Side Bid and that the demand was "turned down" when requested, as defined in the contract. This report summarizes work completed on identifying and developing mechanisms that can be used to validate that smaller customer demand is "available" for demand change and also following instruction that the demand has "turned down." The report concludes by outlining several DR mechanisms that can be used to deliver DSB. Some of these have differing technical and equipment requirements for their operation, as well as for validation of the DR produced.

new zealand

New Zealand has become the newest member of the DSM Programme. The Program welcomes their participation and looks forward to sharing and learning from those working in demand side management.

The Past

Historically, energy has been cheap in New Zealand and so there has been little incentive to use it efficiently. This explains the strong linkage between energy demand growth and GDP growth, a trend many OECD countries have managed to break (see Figure 1). Based on 2005-2006 numbers, such a trend break may be about to happen in New Zealand as well.

A Challenge for a Brighter Outlook

The New Zealand Energy Outlook to 2030 published by the Ministry of Economic Development in 2006 showed that in the business as usual scenario, carbon emissions would go up 30%, residential electricity prices would increase by 20% and oil consumption (and thus oil imports) would go up 35%, all trends that went against current policy objectives. All these trends went against current policy objectives.

To reverse this outlook several suites of actions were analyzed, and one key action emerged as a necessity to include in any action plan—energy efficiency. Energy efficiency would lower emissions, lower reliance on oil imports, and lower household energy bills.

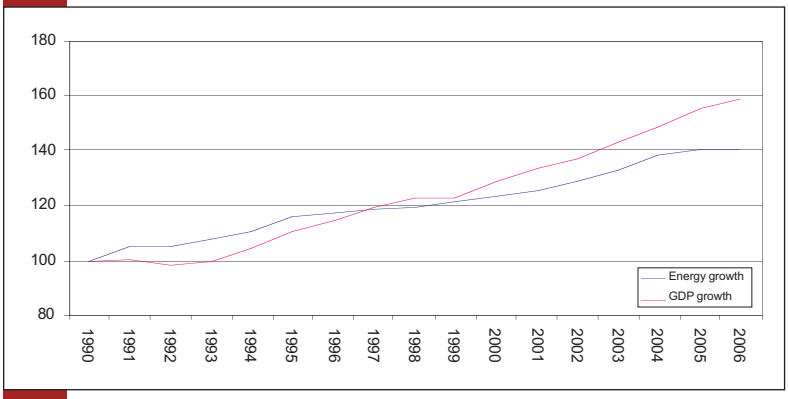


Figure 1. Energy growth and GDP growth since 1990
(index 100)

The Actors

In response to the twin challenges of climate change and energy supply security, the Energy Efficiency and Conservation Authority (EECA) was established in 2000 as an independent government agency that reports directly to the Minister of Energy. In 2001, it published a National Energy Efficiency and Conservation Strategy (NEECS), which set the agenda for government programs to promote greater energy efficiency, energy conservation, and supply of renewable energy across all sectors of the economy.

In pursuit of the objectives set out in the NEECS, EECA administers a number of energy efficiency and renewable energy programs. Its energy efficiency programs are, in general, targeted at different consumer groups or sectors of the economy rather than particular fuel types. EECA also has conducted research on demand side management in New Zealand, including fuel switching (direct use of gas as a substitute for household electrical heating) and the potential for demand response in New Zealand.

Another main actor in the field of DSM is the Electricity Commission. It is a Crown entity set up under the Electricity Act to oversee New Zealand's electricity industry and markets. It was established in 2004 after industry self-governance failed. The Commission regulates the operation of the electricity industry and markets to ensure electricity is produced and delivered to all consumers in an efficient, fair, reliable, and environmentally sustainable manner. The Commission also promotes and facilitates the efficient use of electricity.

Recent Actions

In October of this year, the Government finalized a new New Zealand Energy Strategy and a new NEECS, now renamed the New Zealand Energy Efficiency and Conservation Strategy (NZEECS). These two strategies outline actions that should allow New Zealand to lift its rate of improvement in energy efficiency from the current rate of improvement of 0.5% per year to the OECD average of 0.7% per year by 2012.

The New Zealand Energy Strategy identified more involvement in international research projects, such as projects run through IEA's Implementing Agreements, as one means to

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narrow the gap between New Zealand's energy efficiency improvement rate and those of other OECD countries. Hence, joining the DSM Implementing Agreement was a recommendation in the New Zealand Energy Strategy–a recommendation that is now being carried out.

New Zealand Joins the DSM Programme

The first IEA DSM Task that New Zealand will participate in is *DSM Task XV, Network Driven DSM*. While the distribution companies, and lately also the transmission company Transpower, have for a number of years looked at lowering peak load growth, a significant potential is still seen in improving how the country manages its electrical load to avoid or delay investments in networks and generation capacity. As Dr. Hindsberger notes, "By joining Task XV New Zealand will be able compare current country operations with best practices from around the world and hopefully get some ideas for improvement. Also, with smart meters about to appear in larger numbers, it will be very useful to see how they can enable network driven DSM."

This article was contributed by Dr. Magnus Hindsberger of Transpower New Zealand Ltd.
Email: magnus.hindsberger@transpower.co.nz

Links for more information:

New Zealand Energy Strategy:
http://www.med.govt.nz/upload/52164/nzes.pdf

New Zealand Energy Efficiency and Conservation Strategy:
http://www.eeca.govt.nz/eeca-library/eeca-reports/neecs/report/nzeecs-07.pdf

Electricity Efficiency Potential study – KEMA:
http://www.electricitycommission.govt.nz/opdev/elec-efficiency/

Key EECA programs that contribute to the demand side management of electricity are:

- *Products* including the regulation of energy using products (such as lighting, refrigeration, etc.) and a voluntary endorsement labelling scheme, EnergyStar.
- *EnergyWise Homes* that includes household insulation retrofits and provision of information to consumers to raise awareness of the benefits of energy efficiency.
- *Solar water heating* including financial assistance for solar water heaters and consumer information.
- *Emprove* which supports improved energy management in large energy using companies with financial assistance for energy audits and, also, loans for energy efficiency projects in the state sector (schools, hospitals etc).
- *Energy Intensive Business* which provides financial support to energy intensive businesses to demonstrate energy efficient technologies with the aim of reducing greenhouse gas emissions.

The Electricity Commission has a number of programs aimed at improving energy efficiency and demand-side participation.

- *Energy efficiency facilitation* for example through supporting introduction of compact fluorescent lamps (CFLs), high efficiency electric motors, and air compressors
- *Energy efficiency potentials* through a recently commissioned ground-breaking study from KEMA that assessed the electricity efficiency potential in New Zealand's residential, commercial, and industrial sectors
- *Demand-side bidding and forecasting* where recently introduced rules changes aim to create new price/demand schedules, to encourage demand response to price, and to improve the accuracy of forecast prices
- *Advanced metering infrastructure* by consulting on issues relating to the introduction of 'advanced' (smart) metering which will be followed up by a release of guidelines for advanced metering and/or rule changes to facilitate the introduction of these systems
- *Load management* where the Commission recently released a consultation paper on the potential value of load management in various applications, the allocation of this value and the barriers to achieving it; and considering rule changes to help reduce these barriers where appropriate.

new work

Task XVIII: DSM and Climate Change

Why DSM and climate change? To create sustainable energy systems with minimal levels of GHG emissions a combination of supply side actions (deployment of both renewable energy and other low emission technologies) and demand side actions (technologies to increase energy efficiency) is needed. At this time, DSM and emission mitigation measures are often implemented quite independently. DSM measures are implemented primarily to assist and improve the operation of electricity systems, and any impact DSM measures have on climate change is only a minor consideration, if that. The reduction of GHG emissions from electricity production is focused on improving generation and end-use efficiency, but typically does not consider any benefits to the electricity system (e.g., peak load reduction) that are gained through implementing the measures.

This new DSM Task will look at these two different approaches and identify areas and circumstances in which DSM can contribute to mitigating GHG emissions. The Task objectives are to:

- Identify circumstances in which DSM may help mitigate GHG emissions and may contribute to increasing emissions.
- Identify ways to modify DSM programs so that they can contribute to reducing GHG emissions.
- Identify ways to modify GHG emission mitigation programs so they can deliver benefits to electricity systems.
- Identify opportunities to fund DSM programs using revenue from trading GHG emission reductions.
- Explore whether time of use pricing can be use to reduce GHG emissions.
- Identify and engage stakeholders and disseminate information on DSM as a resource and mechanism for reducing GHG emissions.

Reasons to Participate

- Obtain information on using DSM programs to mitigate GHG emissions and on using GHG emission mitigation programs to deliver benefits to electricity systems.
- Identify opportunities for funding DSM programs with revenue from GHG emission trading schemes.
- Explore whether time of use pricing can be used to mitigate GHG emissions.
- Gain information needed to launch and participate in deployment programs for demand-side technologies.

task XVIII

To learn more or to participate in the new work, contact the XVIII Operating Agent, David Crossley, Energy Futures Australia Pty Ltd., e-mail: crossley@efa.com.au or visit the Task web page:
http://dsm.iea.org/ViewTask.aspx?ID=16&Task=18&Sort=0

Task XI Subtask: Demand Aggregator Route for Delivery of Smaller Customer Energy Services

The work of DSM Task XI, Time of Use Pricing and Energy Use for Demand Management Delivery, has focused on developing and evaluating three mechanisms that allow smaller customers to save energy and that can assist in system security.

- End Use Monitoring and Feedback (EUMF), where customers are presented with a breakdown of their individual end uses of electricity, its costs and environmental impacts.
- Time of Use (TOU) and Dynamic TOU pricing, where customers are presented with different prices at different times and respond by shifting demand from high to low price periods.
- Demand Side Bidding (DSB), where customers participate in energy trading, by contracting and delivering specific demand changes in response to requests by System Operators or Suppliers.

The challenge now is to motivate customers to respond to these mechanisms by buying energy efficient end use equipment and using it in a demand and price flexible way to save energy and assist system security. An attractive option for doing this is the Demand Aggregator (DAG) route. This business model is likely to be different to that of ESCOs as it will be based on delivering services to millions of customers rather than hundreds or thousands.

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Reason to Participate
Many countries are concerned that liberalized markets may not deliver adequate peak electricity generation and network capacity. The domestic sector, which consumes 20% - 40% of the electricity generated in developed countries, has great potential for energy savings.

task XI

To address how to actually deliver and implement commercial energy saving services in the residential and SME (Small and Medium-sized Enterprises) markets using Demand Aggregators is the new focus of DSM Task XI. A one-year Subtask has been proposed and provisionally supported by eleven countries and organizations.

This new work, once approved by the DSM Executive Committee, will investigate the issues of:

- End uses for delivering energy savings and Demand Response (DR).
- Mechanisms for the marketing and delivering of energy saving services.
- Routes for implementing smaller customer energy services.
- The potential for DR measures to be accredited for financial support by governments and regulators, (e.g., White Certificates, EEC/CERT, etc).
- Funding mechanisms for energy services and the provision of information and controls infrastructure.

This proposed Subtask is open for participation.

To learn more or to participate in the new work, contact the XI Operating Agent, Richard Formby, EA Technology, e-mail: richard.formby@eatechnology.com or visit the Task web page: *http://dsm.iea.org/ViewTask.aspx?ID=16&Task=11&Sort=0*

new work *continued from page 10*

Branding of Energy Efficiency
Brand plays key role in the success or failure of a product in any market as it provides a recollection of the product and helps to define the product with precision. Brand also helps to create trust, which is important for reducing the perception of risk associated with the purchase decision. By creating an 'image' of a product through branding an 'emotional attachment' is made with the brand and in turn with the product represented by the brand. Successful branding creates a "pull" for the product or service in the market.

Conversely, products and services lacking a strong brand image fail to attract the consumers' attention. Energy Efficiency (EE) products and services unfortunately fall into this category. As a result, energy efficiency has not been able to create a "lifestyle tag" as for example organic food has done. EE products' lack of brand recognition is particularly frustrating because of the positive economic impact EE products and services actually provide.

To address these issues a new Task was proposed by India at the October 2007 Executive Committee meeting. Building on earlier DSM Programme work in this area, the proposed work, Branding of Energy Efficiency, will examine the barriers facing the branding of energy efficiency products and services, and participants will work with others to develop branding strategies. The work will focus on three levels of branding— products/services and suppliers, consumers, and strategies. The Task Definition Phase is now underway and ten countries have expressed interest in collaborating in the Task's development.

To learn more or to participate in the Task Definition Phase, contact Balawant Joshi, ABPS Infrastructure Private Limited, India, e-mail: balawant.joshi@abpsinfra.com

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