ENERGY EFFICIENCY & DSM BENEFITS

Energy efficiency is a top energy issue for many world leaders, but unfortunately, old habits are hard to break. To address this, the IEA Demand Side Management Programme is dedicated to showing why energy efficiency and DSM should be the first choice in energy saving measures for...

Society – Because the use of DSM and EE reduces greenhouse gases, pollution, and negative health affects caused by burning fossil fuels.

Governments – Because they care about energy system reliability, energy security, climate change, and meeting Kyoto and other GHG reduction targets.

Utilities and Energy Companies – Because the use of DSM measures can help prevent blackouts, shave peak demands, defer the need for new sources of power – including generating facilities, power purchases, and transmission and distribution capacity additions – and make the electricity systems operate more reliably. It also allows them to offer special services to their customers.

Customers – Because DSM measures allow users to save money or receive financial incentives for reducing or deferring energy use and to minimize exposure to rolling blackouts.

IEA DSM PROGRAMME ACHIEVES RESULTS

DATABASES
International Database on DSM – Developed INDEEP (International Database on Energy Efficiency Programmes), a comprehensive international database in four languages, describing over 220 utility DSM programmes in 15 countries.

Mechanisms for Promoting DSM and EE in Changing Electricity Businesses – Created two databases on 1) 99 existing mechanisms (policy, regulatory, financial, and commercial) for promoting DSM and EE and 2) 25 new mechanisms or promoting DSM and EE.

DSM and Climate Change – Developed two case study databases 1) DSM Projects Database: Detailed case studies of 17 DSM projects and 2) Emissions Reduction Projects Database: Description of 13 greenhouse gas emissions reductions projects.

Closing the Loop: Behaviour Change in DSM: From Theory to Practice – Created a social expert platform which has over 200 experts from 21 countries.

HANDBOOKS/GUIDELINES/BEST PRACTICES
Impact of DSM and EE on Kyoto’s GHG Targets – Developed guidelines to help governments evaluate the impact of national and regional DSM and Energy Efficiency programmes for achieving Kyoto greenhouse gas targets.

Improved Methods for Integrating Demand-Side Options into Resource Planning – Published a guidebook on approaches and methodologies for analysis and planning of demand-side programmes and integration of DSM option in utility resource planning.

Demand-Side Bidding – Produced A Practical Guide to DSB, which provides practical guidelines for both the electricity industry and customers on the rules for DSB and how to establish and participate in DSB schemes.

Demand Response Resources – Created a Project Guidebook, which provides a roadmap for assessing DR integration into the market. The book includes tools and can be used as a teaching guide for a DR professional certification programme.
Role of Municipalities in a Liberalized System – Compiled case studies of “best practices” to serve as models for municipalities to effectively implement energy efficiency measures in a liberalized market.

Market Mechanisms for White Certificate Trading – Produced a Sourcebook highlighting the experiences gained in the design and/or operation of White Certificate programmes in France, Great Britain, Italy, Netherlands, and New South Wales, Australia.

Integrated Resource Planning – Published a guidebook for planners on effective methods, techniques, and models for incorporating DSM into utility resource planning.

Network-Driven DSM – Surveyed network DSM projects around the world and prepared 44 case studies with conclusions on the DSM measures used.

Energy Portfolio Standards – Published Best Practices in Designing and Implementing Energy Efficiency Obligation Schemes based on the analysis of 19 different energy efficiency obligation schemes implemented around the world.

Integration of Demand Side Management Energy Efficiency, Distributed Generation, Renewable Energy Sources and Energy Storages – Completed Phase II and produced numerous reports, including Stakeholders involved in the deployment of micro-generation and new end-use technologies.

Standardisation of Energy Savings Calculations – Produced report on the most relevant guidelines and standards – national and international – on energy savings calculations.

MARKET RESPONSES

Communication Technologies for ESCOs – Defined a variety of innovative energy-related services to implement through cost-effective communication technologies to help ESCOs provide better services at lower costs. In addition, developed a prototype communications gateway, FlexGate, which overcomes many of the difficulties in providing wide-ranging, diverse services.

Cooperative Procurement – Created cooperative procurement buyer groups to help stimulate the development of innovative, energy-efficient products. Recipients of the IEA DSM Award of Excellence—AEG clothes dryer that cut energy use in half, two ABB high efficiency electric motors that reduced loses by 20-40%, and copiers from Ricoh and Canon that reduced energy consumption by 70%.

Market Transformation – Conducted an international investigation on attitudes, habits, and the use of energy efficient products. Results provided invaluable information needed when talking about “selling” EE with multinational market actors and industry.

EE & DSM for Smaller Customers – Initiated nine pilot programmes to test different marketing strategies. Results helped to better understand the successful marketing of energy efficient products and DSM measures to residential and small commercial/ industrial customers.

Time-of-Use Pricing and Energy Use for Demand Management Delivery – Developed recommendations on 1) methodologies, benefits and costs of providing disaggregated energy use feedback to smaller customers to motivate energy savings, 2) Time of Use Pricing for smaller customers to motivate demand profile shape change, and 3) demand side bidding for smaller customers.

Competitive Energy Services – Serving as a research and expert platform for national implementation activities. Holding Energy Service Expert Platform dissemination workshops (locations include Brussels, Helsinki, New Delhi, Deventer, Graz and Vienna).

Role of Customers in Delivering Effective Smart Grids – Assessing and reporting on the impact of markets on customers’ willingness to participate in Smart Grids.

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