



Task XIII
Demand Response Resources
IEA Workshop

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View of Demand Response in Liberalized Markets

- Electricity Restructuring and its effect on DR investment
- Must have DR for Competitive Markets to work
- Value of DR has been proven (Reliability, Transmission Congestion, Market Power, Price Volatility, etc.)
- Conservation Culture requires close coordination of Energy Efficiency and DR



Strategic View of DR

- DR/ Electricity much like SPR/Oil
 - *Long Term Asset/Risk Management*
 - *Shock absorber on each end of value chain*
- Competitive Markets alone will not provide adequate investment in DR
- Difference of SPR/DR – Physical Supply Side vs. “Virtual Demand Side”



Task XIII Objectives

- **Achieve Overall Project Objectives and Deliverables**
 - Development of DRR Business Processes
 - DRR Resource Assessment
 - Build Necessary Tool Kit
 - Determine Best Practices
- **Achieve Project Participant Objectives**
 - Development of Participant Business Plan
 - Quantifying DRR Resources
 - Identifying Markets for DRR
 - Valuation of DRR
 - Determining Enabling Technologies
 - Regulatory processes
 - Specific Implementation Plans



DRR Project Chronology

- **February 2003** – PLMA invited to present at IEA Demand Response workshop
- **March 2003** – IEA Secretariat attends Spring PLMA Meeting in Washington D.C.
- **April 2003** – DOE agrees to have USA sponsor DRR project if approved by IEA DSM ExCo
- **April 2003** – IEA DSM ExCo approves DRR Project in Concept
- **May 2003** – DRR Project Working Group formed



DRR Project Chronology *con't*

- **June 2003** – IEA/PLMA Press Releases announcing project and September meetings
- **July 2003** - Project Presented at NARUC Summer Meetings
- **September 2003** – IEA/PLMA International Seminar/Experts Workshop
- **October 2003** – DRR Project Approved by ExCo
- **February 2004** – DRR Project Work Begins
- **March 2004** – US DRCC Formed



Proposed IEA DRR Project

- Define and build turnkey DRR infrastructure model including Business Model, Business Rules, Enabling Technology, Standards and Implementation Plan
- Deliver DRR into “Any” emerging or existing liberalized electricity market
- Not a Research Project but an Actionable Plan



Project Methodology

- Determine “Availability of DRR in given market (Much like Proven Reserves in Oil)”
- Determine “Attributes”
 - *Market Segmentation*
 - *Asset Characteristics*
 - *Existing Technology*
 - *Retail Channels*
 - *Cost Curve*
- Analyze Wholesale and Retail Market Structure



Why is DR Needed?

- DR not integrated in most electricity markets
- Member IEA countries facing energy issues that DR can address
- Need for efficient electricity markets
- Improve the reliability of the electricity grid
- Offers a highly flexible and naturally distributed resource to the network operators
- DRR acts to stabilize electricity markets by engaging demand elasticity
- Allow end use consumers a way to actively participate in electricity markets



Why This Project is Needed?

- **Demand Response is a new field which cuts across wholesale and retail market structures and its benefits are disaggregated across stakeholders**
- **Demand Response is not happening fast enough – It needs a boost**
- **Demand Response stakeholders need a focal point a structure to work together**
- **A collaborative project such as DRR can be more economical and effective than disaggregated efforts**
- **Different market structures require different approaches to DR which this project will address**



IEA-DSM DRR Project Details

- **Sponsoring Country:** USA represented by the U.S. Department of Energy
- **Project Schedule:** approximately 30 months
- **Cost Share Portion:** approximately \$2.0 M U.S.
- **Task Share Portion:** 1300 hours per country
- **Financing:**
 - Country contributions
 - Industry sponsors
 - Analysis buy-in from stakeholders
 - Products
 - MOU to cover NMC participations
 - Agreements with regional organizations



Countries expressing interest

- USA
- Canada
- Netherlands
- Sweden
- Norway
- Spain
- UK
- Australia
- Finland
- Japan
- Korea
- Italy
- New Zealand
- South Africa



US Demand Response Coordination Committee

- **US DRCC intended to oversee US Participation in IEA DRR Project**
- **Joint Letter sent out by Pat Wood/FERC and Jimmy Glotfelty/DOE to CEOs of largest electric utilities, ISOs, PLMA and DRAM requesting participation**
- **DRCC structured as not for profit organization**
- **DRCC will fund a portion of US participation in IEA DRR Project and US “Experts”**
- **Interest expressed in DRCC by 4 ISOs and numerous IOUs and private parties**
- **Request FERC, DOE, PLMA and NARUC serve as DRCC Advisors**



US DRCC Prospects

ISO/RTOS

- ISO NE
- NY ISO
- PJM
- MISO

Private Parties

- AREVA
- NERTEC
- EnerNoc

Agencies

- NYSERDA/ NY CDRG
- California Energy Commission

Energy Companies

- Southern Company
- Excel
- Exelon
- SCE
- Constellation
- AEP
- SRP
- Entergy
- LG&E
- National Grid



Recommendations

- **View the DRR project much like an “Executive MBA” program for development of DRR markets for your country**
- **Develop a strategic view of how DRR should be developed in your country**
- **Use DRR Project as a tool to create DRR as a Strategic Asset for your market**
- **Create a country stakeholder group to oversee project and a vehicle for implementation**
- **Engage the DRR project team to assist in planning and implementation**



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