

Two Years and 100 MW: C&I Program Design for NV Energy

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Agenda

- Overview and context
- Assessing DR potential
- Detailed program plans
- Target segment: Gaming industry
- Outcome and lessons learned



Study Overview

- Provide a menu of DR programs which can provide 100 MW of load reduction between 2010 & 2012
- Target Commercial and Industrial (C&I) customers
- Target only the southern portion of Nevada Energy's service territory (i.e., former Nevada Power service territory)
- Driven by a 2010 Public Utilities Commission ruling directed NV Energy to meet a goal of 100 MW of peak demand by 2012 from C&I customers



Key Attributes

- Study was designed to focus on:
 - Automated response
 - Integration of energy efficiency
 - Customized program design elements



DR Potential – is 100 MW realistic?

- Market characterization
- Relevant DR options
- Determine program acceptance rates
- Estimate achievable savings
- Assess cost-effectiveness of programs



Market Characterization

	Small C&I (< 300 kW)	Medium C&I (300 kW – 1MW)	Large C&I (> 1 MW)	Total C&I
Total Class (MW)	938	390	782	2,110
% of Class	44%	18%	37%	100%
Average customer (kW)	9	307	2,142	21

NAICS Code	Description	Segment	Number of Accounts	Average Max Demand (kW)
3221	Pulp, Paper, and Paperboard Mills	Industrial	3	7,017
3271	Clay Product and Refractory Manufacturing	Industrial	11	8,764
3274	Lime and Gypsum Product Manufacturing	Industrial	8	14,596
7132	Gambling Industries	Entertainment	26	1,525
7211	Traveler Accommodation	Lodging	371	4,710



Relevant DR Options

DR Options	Technology	Targeted End-uses	Notification
Small (LGS-1) DLC	Auto-DR or switch	AC System, Water Heating, Motors	None
Small CPP	PCT, Auto-DR, or switch	AC System, Water Heating, Motors, Lighting, Other	Day-ahead or up to 10 minutes with enablement
Medium and Large CPP	Auto-DR	AC System, Water Heating, Motors, Lighting, Other	Day-ahead or up to 10 minutes with enablement
Small, Medium, and Large Demand Bidding	Auto-DR	Customer Specific	Day-ahead or up to 10 minutes for capacity bidding
Medium and Large Curtailable Contracts	Auto-DR	Customer Specific	Up to 10 minutes depending on contract



Program Acceptance Rates

- Interviews with NV Energy customer representatives
- Interviews with NV Energy customers
- Industry Experience

DR Options	Small C&I (< 300 kW)	Medium C&I (300 – 999 kW)	Large C&I (>1000 kW)
Small DLC	10%	-	-
Pricing - CPP	5%	5%	0.6%
Demand Bidding	3%	6%	14%
Curtable Contracts	-	1%	8%



Achievable DR Potential

- 112.2 MW in 2012 just reaches the 100 MW goal
- Amounts to a 2% reduction in system peak

Program	2011 (MW)	2012 (MW)	2012 (% of class peak)	2012 (% of system peak)
Direct Load Control	4.0	10.0	0.5%	0.17%
Critical Peak Pricing	4.5	8.9	0.4%	0.16%
Demand Bidding	25.0	45.5	2.1%	0.79%
Curtable	23.9	47.8	2.2%	0.84%
<i>Overall Potential</i>	57.3	112.2	5.1%	2.0%



Cost Effectiveness

- Used a break-even analysis – presents the avoided capacity costs necessary for each program to break even
- Compares costs across programs without tying results to a specific avoided cost number
- Useful technique when looking at different costing scenarios

	Small C&I (LGS-1) DLC Program	Critical Peak Pricing Program	Demand Bidding Program	Traditional Curtailable
TRC test	\$98	\$115	\$18	\$28
Utility Cost Test	\$136	\$115	\$39	\$77



Detailed Program Plans

- Target market
- Program description
- Load reduction strategies
- Implementation strategy
- Issues and/or risks
- Marketing strategy
- Incentives
- Schedule
- Administrative requirements
- EM&V requirements
- Estimated participation
- Program budget
- Estimated savings
- Cost effectiveness
- Energy efficiency opportunities

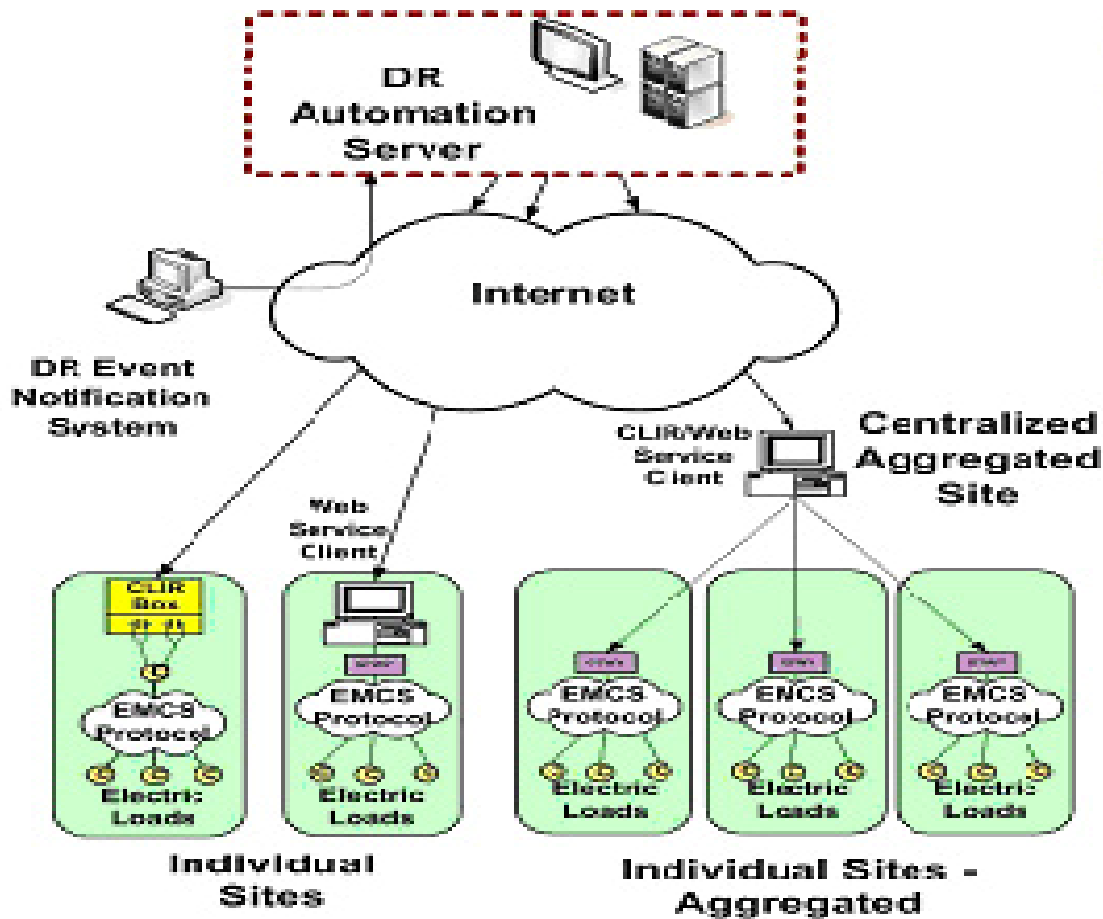
Whew!

Target Industry - Gaming

- Interviews to discuss program parameters
 - Energy and environmental services director
 - Major account representatives
- Focused on demand bidding
 - Flexibility
 - Automation
 - No penalties



Gaming Industry – Enabling Technology



Gaming Industry – Marketing and EE

- Marketing
 - Initial education through workshops and or presentations
 - Follow up with one-on-one contact from Major account reps
- On-site audits for Auto-DR enablement offer opportunities for integration with EE
 - NV Energy Sure Bet energy efficiency rebate program
 - Strategic Energy Management (SEM) opportunities



Lessons Learned

- Talk with customers and account representatives – they are a great resource!
- Analyze load and billing data to target specific customer segments
- A break-even approach to cost benefit analysis is useful and flexible
- Integrating EE and DR programs maximizes energy and demand savings and minimizes costs



Where are we now?

- Over the last year the NV Energy's DSM filings have been under review by the PUC and interveners
 - During the course of the year, the tide steadily turned against the C&I DR goals previously established
- In December of 2011 a Stipulation was filed that eliminated any new DR including the C&I DR programs proposed in the study
 - Results of the study must be tabled for now
 - C&I customers are still interested in DR options
 - May be some hope for a revival during the next IRP in July 2012



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