
**THE LPSC STAFF RENEWABLE PORTFOLIO
STANDARD TECHNICAL CONFERENCE**

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**Presented on Behalf of the
Louisiana Public Service Commission**

March 3, 2009

J. Kennedy and Associates, Inc.

AGENDA FOR MARCH 3 RPS TECHNICAL CONFERENCE

- **Review 2005 LPSC RPS Report**
- **Discuss the Implementation of the Entergy Gulf States Louisiana Green Pricing Tariff pilot**
- **Clarify Scope of Work that stakeholders would like the next phase of the Renewable Portfolio Standard project to include. Potential work may include:**
 - Revise and update the RPS study report
 - Detailed evaluation of renewable resources in Louisiana
 - Federal RPS and Climate Change legislation
 - Rate impact analysis
 - Potential for energy efficiency as part of a RPS

AGENDA FOR MARCH 3 RPS TECHNICAL CONFERENCE (CONTINUED)

- **Potential work may include (continued):**
 - Role for Combined Heat and Power (waste heat)
 - Role for distributed generation technologies
 - Best practices in other states
 - Evaluate the role of tax policy and state funded research and development in supporting renewable energy resource development in Louisiana
 - Consider impacts on job creation/loss in Louisiana
- **Discuss the Economic Stimulus Package**
- **Discuss how stakeholders can work together**
- **Discuss a potential timeline for the project**

LPSC 2005 RPS STUDY

- **An Investigation of the Feasibility of Implementing a Renewable Portfolio Standard for the Jurisdictional Electric Utilities in the State of Louisiana October 2005**
- **J. Kennedy and Associates reviewed national trends regarding RPS Policies**
- **Objective was to determine if an RPS was appropriate for Louisiana**
- **Study reviewed:**
 - Renewable resource options, particularly those applicable to Louisiana.
 - Cost of renewable options versus conventional resources
 - RPS statutes and rules in other states.
 - Rate impacts of implementing a RPS standard.
 - Alternatives to a RPS standard including Green Pricing Tariffs
- **The study led to the implementation of the Entergy Gulf States Louisiana Geaux Green - Green Pricing Tariff Pilot Program**

LPSC 2005 RPS STUDY

- **2005 RPS Study concluded that Louisiana was not endowed with significant renewable resource opportunities**
- **Other states in the US including Texas, Kansas, Wyoming, Minnesota, Oregon, etc, have more abundant amounts of wind resources and hydro energy compared to Louisiana**
- **Due to the cost and availability of renewable resources in Louisiana, a Green Pricing Tariff was recommended as the best way to promote renewable resource policy in Louisiana**
- **Entergy Gulf States Louisiana (“EGSL”) volunteered to be the first Louisiana jurisdictional utility to implement a Green Pricing Tariff as a pilot program**

EGSL GEAX GREEN - GREEN PRICING TARIFF

- **Geaux Green Program designed as a one-year pilot, initially to run from April 2007 to March 2008.**
- **The voluntary program was set up to sell 100 kWh blocks of renewable energy at a cost of \$2.25/block.**
- **An RFP was held to obtain renewable resources. Lacassine and Agrilectric supplied renewable resources to the program.**
- **Payments to suppliers were intended to provide a premium to the utility avoided cost.**
- **Green-e or Environmental Resources Trust (EcoPower) Certification standards were adhered to for the renewable resources, with the exception that pre-1997 resources were permitted.**
- **As a pre-1997 resource, Agrilectric was paid \$59/Mwh, while Lacassine was paid \$65/Mwh.**
- **Lacassine has had deliverability issues, which has limited the amount of its renewable energy commitment that it has been able to deliver.**

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EGSL GEAX GREEN - GREEN PRICING TARIFF

- **Since the inception of Geaux Green program, 376 customers have signed up, 33,430 MWh purchased from suppliers, and 4,180 MWh sold to customers**
- **Results of EGSL's Geaux Green program have been consistent with other Green Pricing Tariff programs**
- **Current efforts are focused on additional efforts to co-market the program**
- **Conversations have been held with the LDNR for example, to consider ways to promote the Geaux Green name**
- **The economic downturn has impacted customer's willingness to sign up**

EGSL GEAX GREEN - GREEN PRICING TARIFF

- **Upon expiration in March 2008, a four month extension implemented as a bridge until decision was made what to do next.**
- **Decision made to continue pilot for EGSL for another 2 years, beginning August 2008, and to expand the Geaux Green program to Entergy Louisiana (“ELL”)**
- **Entergy updated its marketing plans intended to achieve greater penetration levels during the next 2 years.**
- **CLECO and SWEPCO are working on the implementation of Green Pricing Tariffs:**
 - Cleco potentially will have a program designed by late 2009
 - SWEPCO is working on preparing an RFP for renewable resources for their tariff and will also potentially have a program implemented in 2009.
- **Implementation of CLECO and SWEPCO’s Green Pricing Tariff affected by:**
 - Uncertainty associated with National RPS legislation
 - Economic downturn

EGSL GEAX GREEN - GREEN PRICING TARIFF

- **Hurricanes Gustav and Ike struck September 1 and 13th, respectively, which slowed the implementation of the Entergy's updated marketing plans.**
- **New marketing materials designed, billboards placed including in ELL's service territory.**
- **Renewed focus on co-marketing and grassroots participation planned. For example, efforts with LSU Ag Center underway.**
- **Commercial and radio campaigns to begin first quarter 2009.**

GREEN PRICING TARIFF RESULTS

	Energy Supply				Customer Purchases			Customer Purchases		
	Lacassine		Agrilectric		EGSL			ELL		
	Contracted MWh	Delivered Mwh	Contracted MWh	Delivered Mwh	Customers Signed Up	Blocks Billed	MWH Sold	Customers Signed Up	Blocks Billed	MWH Sold
April-07		NA		1,842						
May-07		NA		1,165	54	301	30			
June-07		NA		1,708	154	794	79			
July-07		NA		1,972	200	2,029	203			
August-07		NA		1,732	225	2,150	215			
September-07		NA		1,893	233	2,209	221			
October-07		169		1,808	247	2,246	225			
November-07		708		1,920	262	2,323	232			
December-07		270		1,764	266	2,391	239			
January-08		376		1805	272	2,394	239			
February-08		29		1667	277	2,420	242			
March-08		NA		1724	283	2,406	241			
April-08	NA	NA	1,842	1,842	306	2,491	249			
May-08	NA	NA	1,165	1,165	314	2,492	249			
June-08	NA	NA	1,708	1,708	342	2,519	252			
July-08	NA	NA	1,972	1,972	351	2,590	259			
August-08	NA	NA	1,000	1,000	338	2,499	250	2	9	1
September-08	2,000	0	1,000	1,000	328	2,448	245	6	38	4
October-08	3,000	191	1,000	1,000	332	2,420	242	5	26	3
November-08	3,000	0	1,000	1,000	360	2,540	254	16	58	6
		1,743		31,687			4,166			14
			Total	33,430				Total		4,180

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Potential Scope of Work for Next Phase of RPS Project

Revise RPS Report

- **Revise and update the RPS study report**
 - Review RPS programs in other states
 - Evaluate Federal Legislation and potential impact on Louisiana
 - Identify renewable resources appropriate for Louisiana
 - Consider the use of RECs

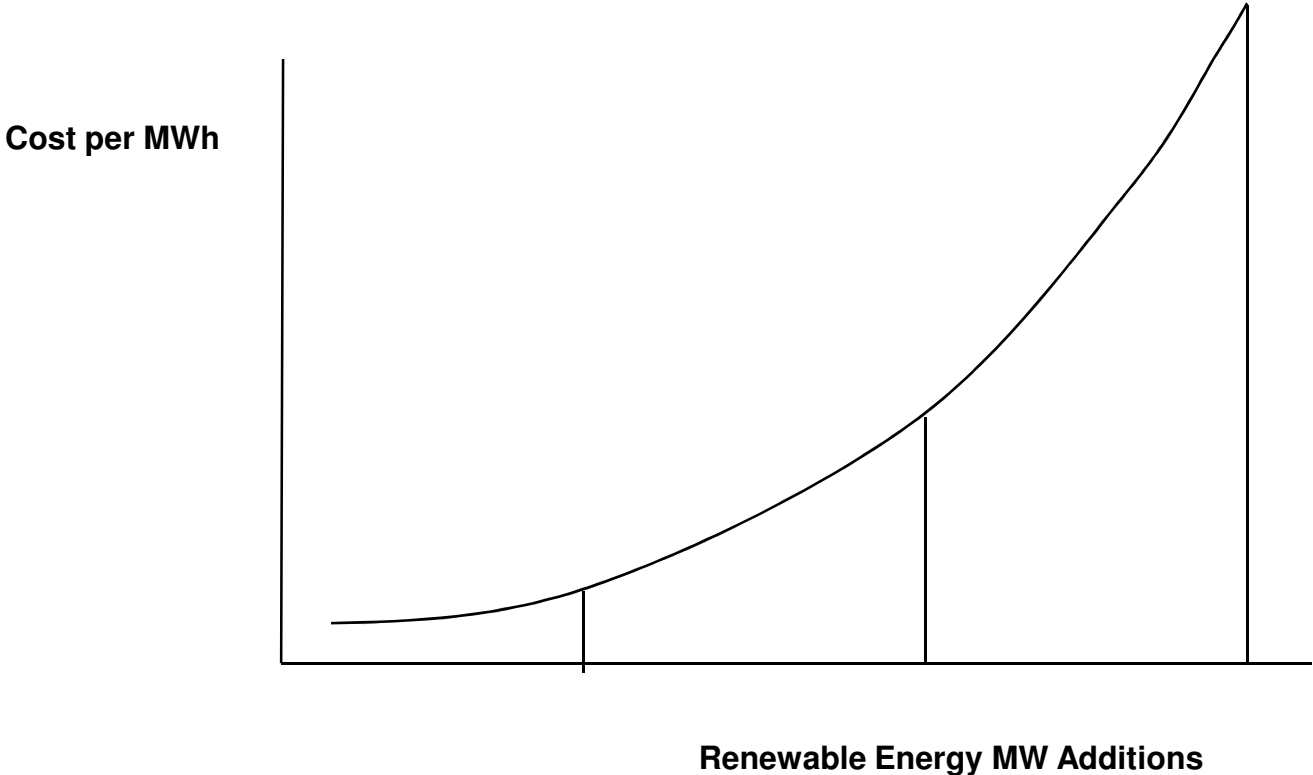
Potential Scope of Work for Next Phase of RPS Project Detailed Resource Evaluation

- **Detailed evaluation of renewable resources in Louisiana**
 - Establish a Task Force to determine a procedure to evaluate the amount of renewable resources that can be added in Louisiana
 - Task force consists of LDNR, LPSC, utilities, and possibly other interested parties
 - Calculate the economic potential for renewable resources by service territory in Louisiana

Louisiana Renewable Resource Cost Curve

Develop Supply Cost Curves

Resource Resource Supply Cost Curve for Each Resource Type



Potential Scope of Work for Next Phase of RPS Project Review Federal and State Policies

- **Federal RPS and Climate Change legislation**
 - Evaluate all potential Federal RPS policy and potential Climate Change Legislation to determine policies that should be promoted for Louisiana
 - Interface with various policy makers in Louisiana who can influence the decisions that will be reached in Washington
- **Evaluate best practices in other states**

Potential Scope of Work for Next Phase of RPS Project Federal RPS Legislation

- **Senate -**

- Feb 12, Tom Udall (D-NM) introduced RPS legislation requiring 4% renewable by 2012 and 25 percent by 2025. Allows RECs.
- Energy and Natural Resources chair Jeff Bingaman (D-NM) draft legislation with 4% by 2012 and 20% from 2021 to 2039. New or existing resources permitted. Fed REC Trading program established. Energy Effic and CHP also count.
- Bingaman's goal - move an RPS separately and thus more quickly than climate change legislation, perhaps in early spring.

- **House**

- Rep Ed Markey (D-MA) introduced a target of 6% by 2013, 17.5% by 2021, and 25% by 2039. Utilities must buy allowances.

- **Concerns expressed:**

- Increasing renewables and reducing the GHG have frequently been treated as parallel objectives, but this is not always the case.
- Senator Lisa Murkowski (R-AK) - Is a RPS "the right policy at this time or whether it has been overtaken by the need to address climate change standards."
- The House is also addressing this issue as it determines whether or not to include renewables in a broader climate change bill.

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Potential Scope of Work for Next Phase of RPS Project Federal Climate Change Legislation

- **Most Prominent Appears to be Senate - Bingaman/Specter Low Carbon Economy Act (S. 1766)**
 - Cap and Trade
 - 2006 level by 2020, 1990 level by 2030
 - Allowances
 - » Majority given free, but gradually reduced each year after the first five years
 - » 24% auctioned to generate revenue for the research, development, and deployment of low- and no-carbon technologies. Increases to 53% by 2030, and then increase at 2% per year thereafter;
 - » 8% set aside annually for carbon capture and storage incentives;
 - » 5% reserved to promote agricultural sequestration;
 - » 1% rewarded to companies that have undertaken “early actions” to reduce emissions.
 - » 9% distributed directly to States to promote their policies.
 - Technology Accelerator - \$12/Ton
- **Other bills include:**
 - S. 2191 - America’s Climate Security Act - Lieberman-Warner Bill
 - S. 3036 - America’s Climate Security Act - Manager’s Amendment

Potential Scope of Work for Next Phase of RPS Project Economic Stimulus Package

- **American Recovery and Reinvestment Act of 2009 (\$787 billion stimulus plan)**
 - **Energy transmission and alternative energy research (billions):**
 - » \$11.0 Smart Grid (6.3 billion allocated to states, assets deprec over 10 years)
 - » \$7.5 Renewable Energy & Transmission Lines
 - » \$0.4 DOE Advanced renewable research
 - **Efficiency (billions):**
 - » \$21.8 Fed buildings, local gov grants, low income housing, Dept of Defense housing
 - **Mass transit and advanced automobiles (billions):**
 - » \$8.4 Mass Transit
 - » \$8.0 Amtrak
 - » \$0.6 Hybrid vehicles and reduce diesel emissions
 - **Green jobs training (billions):**
 - » \$0.5 Green jobs training
 - **\$58.2 Billion Total Energy Funding in Stimulus Plan**

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Potential Scope of Work for Next Phase of RPS Project Rate Impacts

- **Rate impact analysis**
 - Extend the analysis that was included in the previous RPS study

ILLUSTRATION OF RATE IMPACT FROM 2005 RPS REPORT

Rate Impacts

Table 3
Illustration of the Impact of RPS "Targets" on Residential Electric Bills

ELI

Res mWh	8,425,410
Res Cust	553,180
Avg Use/Mo.	1,269
Total mWh	28,182,541
LPSC Jurisdiction mWh	27,866,462
Losses	6.0%
mWh @ Generation	29,873,493
Res % of Total	30.23%
Renewable Premium Per mWh	\$ 10.00

	<u>Typical Residential</u>		<u>Residential Impact</u>	<u>Retail System</u>	<u>Renewable</u>	<u>RPS %</u>
	<u>Monthly Bill Impacts</u>		<u>\$/kWh</u>	<u>Impact</u>	<u>Energy</u>	<u>"Target"</u>
				<u>(\$1000)</u>	<u>(mWh)</u>	
\$	0.25	\$	0.0001969685	\$ 5,488.8	548,881	1.84%
\$	0.50	\$	0.0003939369	\$ 10,977.6	1,097,763	3.67%
\$	1.00	\$	0.0007878738	\$ 21,955.3	2,195,526	7.35%
\$	3.00	\$	0.0023636215	\$ 65,865.8	6,586,577	22.05%
\$	4.00	\$	0.0031514953	\$ 87,821.0	8,782,102	29.40%
\$	10.00	\$	0.0078787382	\$ 219,552.6	21,955,256	73.49%

Potential Scope of Work for Next Phase of RPS Project Energy Efficiency

- **Potential for energy efficiency as part of a RPS**
 - Energy Efficiency Resource Standard Legislation (EERS)
 - Evaluate use of energy efficiency in other states
 - Discuss revenue decoupling policies
 - Stimulus package designed to create green collar jobs to boost employment and protect the environment.

Potential Scope of Work for Next Phase of RPS Project CHP and Distributed Generation

- **Role for Combined Heat and Power (waste heat)**
 - Stimulus plan offers 10% investment tax credit for CHP through 2016
- **Role for distributed generation technologies**
 - Evaluate the opportunity for including these technologies as part of meeting an RPS standard

Potential Scope of Work for Next Phase of RPS Project Tax Policy and Job Creation/Loss

- **Evaluate the role of tax policy and state funded research**
 - Louisiana currently has income tax credits (Revised Statute 47:6030)
 - For the installation of a wind or solar system by a Louisiana homeowner or the owner of a residential rental apartment project.
 - Purchase had to made on or after January 1, 2008.
 - Amount of the credit is equal to 50 percent of the first \$25,000 of the cost of each wind or solar energy system.
- **Consider impacts on job creation/loss in Louisiana**

Potential Scope of Work for Next Phase of RPS Project Next Steps

- Discuss how stakeholders can work together
- Discuss a potential timeline for the project