
An EPIC Update

Industrial Environmental Association

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Presentation Overview

- About EPIC
- EPIC Project Review
- Policy Update
 - Legislative
 - Regulatory

What's in a Name?



EPIC
Evidence Photographers International Council



About EPIC

- Academic and Research Center
 - University of San Diego School of Law
- Funded with settlement monies from a lawsuit against Duke Energy
- Agreement between San Diego District Attorneys Office and USD

About EPIC

■ EPIC's Mission

- ❑ Educate the public and public officials concerning energy issues and policies;
- ❑ Educate law school students about energy law and policy;
- ❑ Conduct research and analysis on energy trends, policy options and their implications; and,
- ❑ Encourage the use and development of less costly and more environmentally-friendly energy resources.

About EPIC

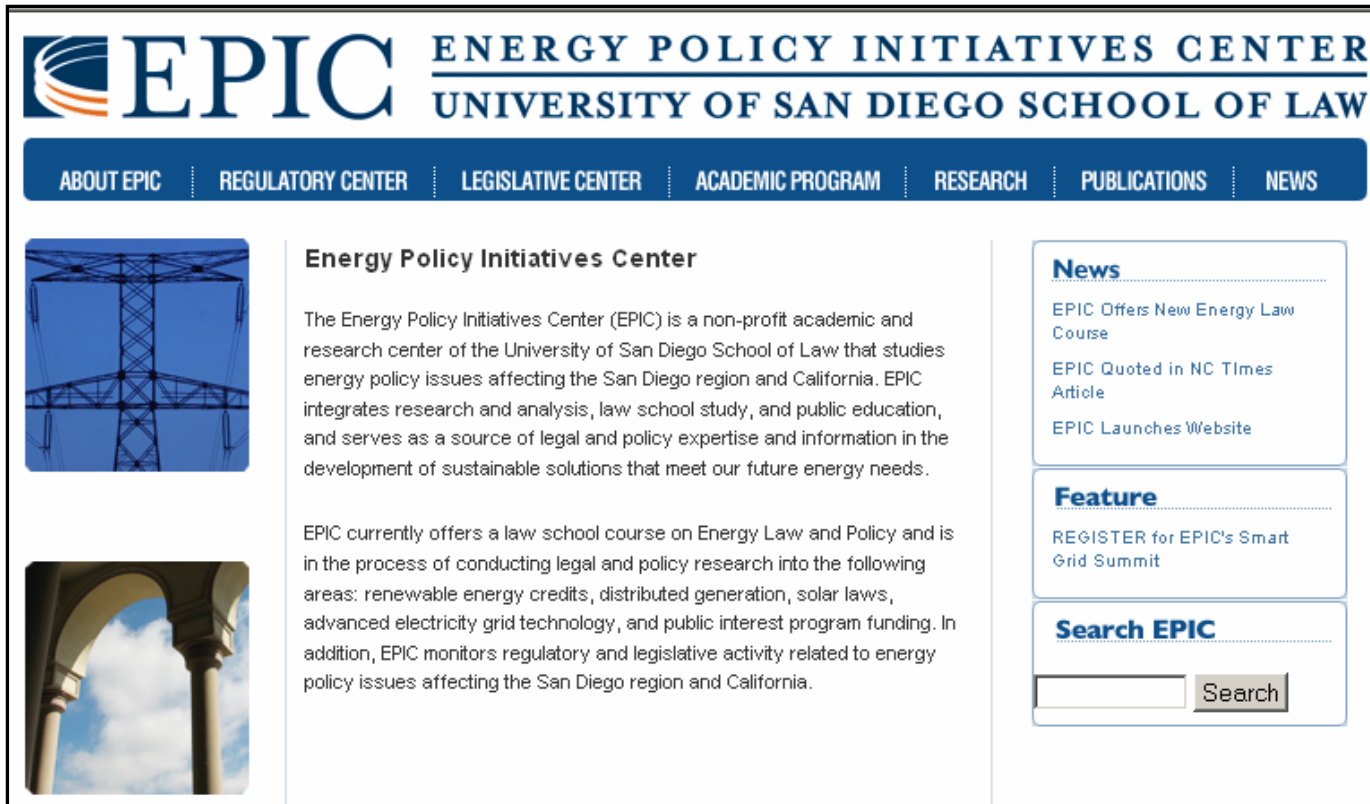
- Research and Analysis
 - Smart Grid
 - Public Goods Charge Fund
 - Renewable Energy Certificates (RECs)
 - Solar Laws
 - AB 1X Rate Caps
 - Solar Financing
 - Energy Legislation
 - Energy Regulation

About EPIC

- Academic Program
 - Energy Law and Policy Course
 - Fall 2006
 - Taught by two local energy attorneys
 - Focus: Electricity and Natural Gas
 - Energy Law and Policy Clinic (*in development*)
 - Work with energy agencies to conduct legal and policy research

About EPIC

- EPIC Website: www.sandiego.edu/epic



The screenshot shows the EPIC website homepage. At the top is the EPIC logo, which consists of a stylized 'E' with three curved lines in blue and orange, followed by the text 'EPIC ENERGY POLICY INITIATIVES CENTER UNIVERSITY OF SAN DIEGO SCHOOL OF LAW'. Below the logo is a dark blue navigation bar with white text for 'ABOUT EPIC', 'REGULATORY CENTER', 'LEGISLATIVE CENTER', 'ACADEMIC PROGRAM', 'RESEARCH', 'PUBLICATIONS', and 'NEWS'. The main content area is divided into three columns. The left column features two images: a blue-tinted image of a power transmission tower and a photograph of a classical building with arches. The middle column has a heading 'Energy Policy Initiatives Center' followed by a paragraph describing EPIC as a non-profit academic and research center. Below this is another paragraph detailing the center's current offerings and research areas. The right column contains three sections: 'News' with three links, 'Feature' with one link, and 'Search EPIC' with a search input field and a 'Search' button.

EPIC ENERGY POLICY INITIATIVES CENTER
UNIVERSITY OF SAN DIEGO SCHOOL OF LAW

ABOUT EPIC | **REGULATORY CENTER** | **LEGISLATIVE CENTER** | **ACADEMIC PROGRAM** | **RESEARCH** | **PUBLICATIONS** | **NEWS**

Energy Policy Initiatives Center

The Energy Policy Initiatives Center (EPIC) is a non-profit academic and research center of the University of San Diego School of Law that studies energy policy issues affecting the San Diego region and California. EPIC integrates research and analysis, law school study, and public education, and serves as a source of legal and policy expertise and information in the development of sustainable solutions that meet our future energy needs.

EPIC currently offers a law school course on Energy Law and Policy and is in the process of conducting legal and policy research into the following areas: renewable energy credits, distributed generation, solar laws, advanced electricity grid technology, and public interest program funding. In addition, EPIC monitors regulatory and legislative activity related to energy policy issues affecting the San Diego region and California.

News

- EPIC Offers New Energy Law Course
- EPIC Quoted in NC Times Article
- EPIC Launches Website

Feature

- REGISTER for EPIC's Smart Grid Summit

Search EPIC

Research and Analysis

- Smart Grid Study
 - Topic: Assess feasibility of intelligent grid in San Diego region
 - Release Date: September 30, 2006
 - Project Team:
 - EPIC – Prime Contractor
 - SAIC – Technical Subcontractor
 - SDG&E – Funding partner
 - UCAN – Funding partner

Research and Analysis

- Smart Grid Study components:
 - What is a Smart Grid?
 - Scenario Development
 - Gap Analysis between Current and Future State
 - Cost Benefit Analysis (Business Case)
 - Implementation Plan

Research and Analysis

- What is a Smart Grid?
 - The Internet of the power grid
 - From the wind farm to your dishwasher:
 - Advanced controls, sensors, & measurement
 - Advanced communications
 - Smart meters
 - Smart appliances
 - Integrated distributed generation

Research and Analysis

- What is a Smart Grid?
 - Characteristics of a Smart Grid
 - Self Healing
 - Empowers and incorporates the consumer
 - Tolerated security attacks
 - 21st Century power quality
 - Accommodates a wide variety of generators
 - Fully enables electric markets
 - Optimizes asset utilization
 - Minimized O&M

Source: U.S. DOE Modern Grid Initiative

Research and Analysis

- Why Consider a Smart Grid?
 - Could support regional policy goals
 - Regional Energy Strategy 2030
 - Could integrate policy goals
 - CA Loading Order
 - Efficiency/Demand Response
 - Renewables & distributed generation
 - Generation
 - Transmission
- Technology advances might demand it

How do we maximize these?

San Diego Smart Grid Summit

- Date: October 25-26, 2006
- Location: Joan Kroc IPJ (USD Campus)
- Focus: Implications of a Smart Grid in San Diego Region
 - EPIC Smart Grid Report
 - Policy and regulatory issues related to Smart Grid
 - Technological advances in the Smart Grid
 - Regional planning considerations

San Diego Smart Grid Summit

- Confirmed Speakers:
 - **Kevin Kolevar**, Director of the U.S. Department of Energy's Office of Electricity Delivery and Energy Reliability
 - **Senator Christine Kehoe**, Chair, CA Senate Energy, Utilities, and Communications Committee
 - **Commissioner Dian Grueneich**, California Public Utilities Commission
 - **Jim Detmers**, Vice President of Operations, California ISO
 - **Kurt Yeager**, Founder of the Galvin Electricity Initiative and President Emeritus, Electricity Power Research Institute

Research and Analysis

- Following CA's Public Goods Charge (PGC)
 - Paper Released 9-12-06
 - Tracked Contributions and Expenditures
 - Renewable Energy Program (REP)
 - Public Interest Energy Research Program (PIER)
 - For period 1998-2005
 - Overall Findings
 - IOUs customers contributed over \$6.4 billion to PGC
 - SDG&E customers contributed over \$580 million to PGC
 - For REP and PIER SDG&E contributed \$142 million
 - SDG&E service territory received back 50 of these contributions

Research and Analysis

- Following CA's Public Goods Charge (PGC)

Table 1: Contributions to the PGC Fund from 1998 to 2005 (\$ million)

IOU	REP	PIER	Energy Efficiency	CARE	Total
SDG&E	\$104.70	\$38.20	\$258.90	\$181.56	\$583.36
SCE	\$487.40	\$218.68	\$687.98	\$1,489.00	\$2,883.06
PG&E	\$496.18	\$246.70	\$852.61	\$1,366.00	\$2,961.49
Total	\$1,088.28	\$503.58	\$1,799.49	\$3,036.56	\$6,427.90

Research and Analysis

- Following CA's Public Goods Charge (PGC)

**Table 2: Comparison of Total Contributions and Distributions for each IOU (\$million)
Renewable Energy Program and PIER Program**

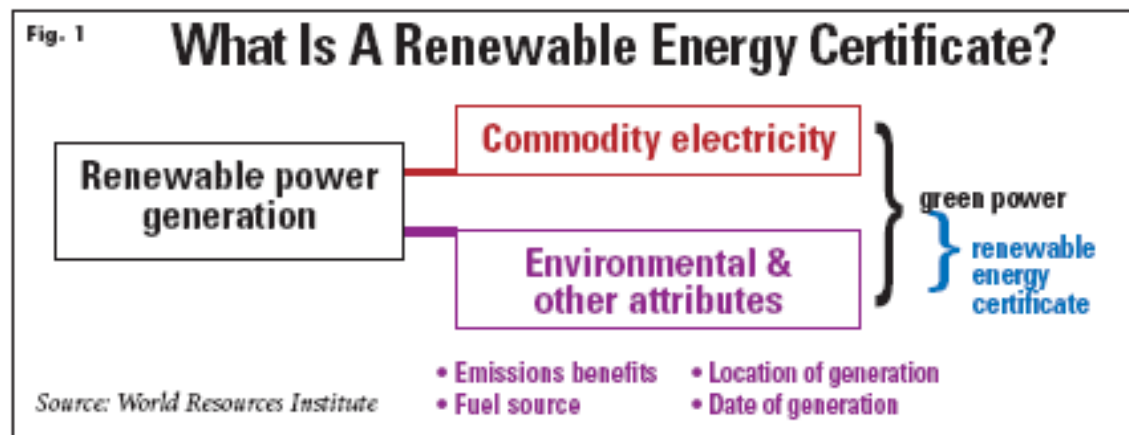
	SDG&E	SCE	PG&E
Contributions	\$142.90	\$706.09	\$742.88
Distributions	\$71.93	\$229.18	\$517.32
% of Contributions	50%	32%	70%

Research and Analysis

- Following the Public Goods Charge (PGC)
 - Why only 50%?
 - Loan to General Fund of \$150 million
 - Some funds are unspent or encumbered
 - Administrative costs
 - Number of existing and new renewables
 - Some funds allocated to other service territories, including municipal utilities
 - Following the money is not the whole story!

Research and Analysis

- Renewable Energy Certificates (RECs)
 - What is a REC?
 - Right to claim the environmental attributes of renewable energy.



Research and Analysis

- Renewable Energy Certificates (RECs)
 - Why do we have RECs?
 - Compliance tool for Renewable Portfolio Standard
 - Flexible mechanism to transfer rights to environmental attributes
 - Additional financial incentive for renewable development
 - Who owns a distributed REC?
 - Complicating factors
 - Subsidies
 - Pre-existing contracts for renewable energy
 - Generator owner or utility (ratepayers)

Research and Analysis

- AB 1X Rate Caps

- Caps residential rates at 130% of baseline
 - CA Water Code §80110
- Tiered rate structure puts increased costs into higher residential tiers

Summer	SDGE	SCE	PGE
Baseline energy	12.867	11.808	11.43
101%-130% of Baseline	14.884	13.74	12.989
131%-200% of Baseline	25.664	22.835	21.981
201%-300% of Baseline	26.571	35.452	30.292
Over 300% of Baseline	28.154	48.066	34.648

Regulatory Update

- Activity at the CPUC
 - Sunrise Power Link
 - Pre Hearing Conference tonight in Ramona.
 - SDG&E Long Term Resource Plan
 - Roadmap for SDG&E's energy procurement
 - SDG&E to file plan any day now...
 - CA Solar Initiative
 - Recent decision confirms rebate structure/amount
 - SDG&E Advanced Meter Initiative
 - SDG&E filed its plan; CPUC is hearing case.

Legislative Update

- Energy Bills Recently Signed into Law
 - SB 1 (Murray) Solar energy / Net metering
 - SB 1294 (Ducheny) Geothermal Waste Exemption
- Numerous Bills Awaiting Action by Governor
 - See handout

Thank You

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