Energy Reform

Creative solutions for sustainable energy markets
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Deloitte’s Government & Public Services Energy Reform Team has 20+ years of experience delivering impact to clients and counterparts in the U.S. and around the world in traditional and renewable energy generation, regulated utility advisory services, energy trade and market development, industrial and residential energy efficiency, and climate change adaptation and resiliency. We have worked with U.S. agencies in over 80 countries to resolve pressing energy and climate change problems in the midst of unprecedented challenges, guiding our clients to adapt to the changing dynamics of global energy demand and supply as well as evolving infrastructure priorities.
With more than 8,000 energy practitioners across five continents, our global network of locally-owned member firms enables us to provide tailored advice for each country or market’s specific conditions. Our counterparts include policymakers, regulators, investors, public and private generators and utilities, energy services companies, local community organizations, and electricity end-users. Working alongside our counterparts and clients, our practice advances energy and natural resources development, financing, and investment, energy sector policy, transparent governance, and operational and institutional reform. By combining our clients’ public sector mission with the power of the private sector, Deloitte has helped to mobilize over $15 billion dollars in energy, power, and climate change investments globally. A field-tested implementer of U.S. government energy programs across five continents, we have an established track record as a trusted advisor and a demonstrated ability to develop and implement energy services and solutions in developed and emerging markets.

Global solutions, local delivery

As a global leader, Deloitte and our member firm network:

- Serve 92% of Fortune 1000 Power & Utilities companies
- Serve 73% of the Global Fortune 500 Energy, Resources, and Industrials (ER&I) companies, including:
  - 18 of the 23 largest Power & Utilities companies,
  - 38 of the 47 largest Oil, Gas, and Chemical companies, and
  - 20 of the 35 largest Mining & Metal companies.

Deloitte Research Center for Energy and Industrials

The Deloitte Research Center for Energy and Industrials (the “Center”) provides a form for innovation, thought leadership, groundbreaking leadership, and industry collaboration to help companies solve the most complex energy challenges. The Center publishes research and analysis that presents a unique point of view on a range of topics, including decarbonization strategies, digitization and cyber threats, energy storage, hydrogen, customer engagement, among other disruptive market trends and technologies.

For more information on the latest insights and to register for upcoming events, please visit [www.deloitte.com/us/powerandutilities](http://www.deloitte.com/us/powerandutilities) or connect with us at @Deloitte4Energy.
Our Energy Reform Capabilities

Our work accelerating energy sector development and reform in the U.S. and globally provides strategic and specialized support across five core elements in the energy sector.

**Policy and Strategy**
Deloitte works to analyze the legal and political enabling environment and specific organizational objectives for governing entities in the energy sector to guide development of the foundational policies and strategies that drive value across power and utilities, oil and gas, and extractive resource organizations in the sector. Through our global network and in-depth industry knowledge, we provide tailored insight to assist clients and counterparts to develop energy policy and craft regional, national, and project specific strategies to help meet reform goals.

**Regulatory Reform**
Deloitte bridges the public and private sector to address the challenges affecting energy markets, and facilitate implementation of regulatory, legal, and policy mechanisms which will instill confidence and competition within markets. By refining the underlying regulatory frameworks, our work allows citizens and rate-payers to benefit from the most accessible, reliable, and clean energy possible and includes low-income and disadvantaged consumers.

**Project Development and Finance**
As a global leader in the financial sector with deep relationships across the world's top banks and financial institutions, Deloitte understands how to develop project structures and financial mechanisms for effective projects — thereby helping to attract investment capital and leverage private sector finance. Our leading management consulting capabilities also allow us to provide advisory services throughout the project lifecycle — from project inception, financing, and planning to commercial operation and implementation.

**Human and Institutional Capacity Building**
Building local capacity is critical to achieving long-term results. Deloitte delivers advisory assistance through training, direct guidance, and mentorship, and focuses on the development of institutional processes that help organizations achieve desired outcomes with their own resources. Deloitte’s approach to capacity development delivers results long after the project ends, making initiatives more effective and sustainable for counterparts to maintain.

**Technology-Driven Operation Support**
Deloitte leverages existing data to develop and deploy customizable models and visualizations that provide new insights and enable the implementation of operational efficiencies. Deloitte uses both our own proprietary modeling software as well as leading class industry packages to help energy sector entities harness, analyze, and use data to address critical business leads, such as improved integrated resource planning, dynamic and multi-dimensional forecasting, and increasingly complex supply chain optimization. Our goal is to provide improved decision-making and visibility into opaque facets of the sector.
Our innovative energy solutions

Our solutions have helped organizations worldwide address pressing challenges across energy financing, regulation, commercialization, modeling, and security. These dynamic solutions can be tailored to each client’s context and are aligned to our five core capability areas.

- **Policy and Strategy**
- **Regulatory Reform**
- **Project Development and Finance**
- **Human and Institutional Capacity Building**
- **Technology-Driven Operations Support**

**RegExplorer** is an AI-enabled software solution accelerating our clients’ journey into the future of regulation. It analyzes regulatory text, assisting government agencies by identifying areas of regulatory overlap or gaps, thereby providing a deeper understanding of their regulatory landscape.

**XBRL Portal** is an XBRL-based solution to streamline the collection of data needed to regulate the energy industry and transition it to an online modality, making the data more readily available for interpretation and analysis. This allows for rapid deployment of modifications across multiple stakeholder groups.

**MarketPoint** is a powerful suite of tools and services developed by Deloitte to model large, complex energy systems, empowering our clients to assess the impact of market factors on investment decisions. Deloitte has used MarketPoint to assess the impacts of regulatory scenarios on power systems and natural gas infrastructure.

**CentralSight™** is a platform that empowers organizations to identify leading indicators of risk, dissect and analyze global supply chains and their participants, and radically increase supply chain assurance and security. It is a first-of-its-kind large-scale entity resolution platform purpose-built to illuminate, triage, mitigate, and monitor supply chain risk by enabling time-sensitive, multi-tier autonomous supplier network illumination.
**Market-Centered Energy Planning (M-CEP)** is an innovative approach to energy planning that focuses on the rapidly changing energy markets and the increasing involvement of energy consumers in dictating the type and level of energy they will consume.

**CYPRESS (Capacity, Performance, Results, and Sustainability)** methodology assists organizations in their efforts to lead and institutionalize capacity development initiatives that achieve and sustain measurable performance improvement. Deloitte has used CYPRESS to stand-up energy and gas regulatory bodies and improve performance of existing regulators.

**FutureScape** is a modeling and simulation solution platform that creates digital replicas of large-scale systems, such as entire cities, commodity flows, or large industrial infrastructure. Inside the digital interface, users can run scenarios and experiment with energy solutions.

**Energy Security Scope** is a Tableau and Python-based modular tool that integrates enterprise facility data, energy and utility data, and asset data. A graphical user interface allows users to evaluate energy resilience and reliability through an operational and full-scale lens.
Our global experience and impact

Policy and Strategy

Energy Access and Rural Electrification in Southern Africa
Facilitated increased investment in electricity supply and access across 11 countries by strengthening the regional enabling environment and facilitating transactions through effective regulation, increased commercial viability of utilities, enhanced regional harmonization, demonstration/scale-up of clean energy and efficiency technologies, and institutional/human resources capacity building. Facilitated 130,000+ connections (8,500 on-grid; 127,000 off-grid).

Loss Reduction and Performance Improvement in Mozambique
Created a comprehensive loss reduction strategy for the national utility that identified specific areas for revenue protection and operational upgrades for metering and distribution, driving long-term improvements in both revenue and resilience. Worked with both the C-suite leadership and field offices to develop a Community Engagement Strategy and Roadmap to improve engagement with residential and commercial customers and businesses at a critical time for electrification goals.

Renewable Energy Integration in India
Supported the Government of India’s efforts to add large-scale renewable energy onto the grid through a series of pilot activities to demonstrate commercial and operational viability. Many of the innovations were scaled across the country to optimize grid performance and help meet renewable energy targets. Supported India’s Central Electricity Regulatory Authority and multiple state Regulatory Commissions to revise national and state standards, policies, and codes to more effectively support renewable energy integration.

Regulatory Reform

Policies and Grid Codes in the Caribbean
Facilitated the development of clean energy policies in eight Caribbean to promote renewable energy integration into the energy sector and promote renewable energy financing. The interventions led to the publication of five detailed grid codes and accompanying policies in Jamaica, as well as grid codes in Grenada and Barbados, that have served as models among Caribbean nations.

Establishment of Independent Energy Sector Regulator in Nepal
Helped establish the Electricity Regulatory Commission and provided capacity building to Nepal agencies on regulatory preparedness and the basics of electricity regulation. For the first time in Nepal’s history, electricity sector regulation began to use transparent and fair procedures that give stakeholders the opportunity to participate in the regulatory process.

Improvement of Regulatory Outcomes in Georgia
Guided the Government of Georgia and implemented Deloitte’s Regulatory Impact Assessments solution, which aligned Georgia with the European Union’s Third Energy Package, established a day-ahead power market, and set goals for renewable energy and protections for vulnerable customers.
Project Development and Finance

Corporate Renewable Energy in Vietnam
Enabled transactional mechanisms that allowed the purchase of electricity directly from renewable energy generation (i.e., a corporate power purchasing model), resulting in more than $300 million in investments and commitments from multinational corporations representing more than 700,000 workers in support of the corporate power purchase agreements.

Energy Security and Resilience at U.S. Navy’s OCONUS Bases
Enabled third-party financing to develop more than 100 MW of new generating facilities and microgrid capabilities valued at $1.3 billion at SUBASE New London to advance the base’s energy reliability and energy security. New London is critical to the Navy’s mission as the base supports 15 nuclear-powered fast-attack submarines.

Renewable Energy Investment Mobilization in Southeast Asia
Worked across 12 countries in Asia to build a $1+ billion pipeline and leverage $700 million in funds directly or indirectly for clean energy investments that avoided at least 21 million metric tons of carbon dioxide equivalent. Achieved this through strategic matchmaking, funding pre-feasibility and other technical studies, and creating business mentorship programs for distinct technologies and across different asset classes.

Human and Institutional Capacity Building

Commercialization and Performance Improvement in Georgia
Implemented Deloitte’s CYPRESS solution to advise and support the reorganization of Georgian National Energy and Water Regulatory Commission, now a leading regulator in the country. As a result, Georgia’s tariff and pricing capabilities advanced from nascent to leading, and monitoring capabilities grew from nascent to advanced with more capable staff, new tools, and stronger internal practices and procedures.

Natural Gas Reform in Ukraine
Advised state-owned gas company, Natfogaz, and its upstream subsidiary, UkrGasVydobuvannya, on improving corporate governance and increasing production efficiency to align with institutional and operational reforms. As a result, the companies improve corporate governance practices and achieved $1+ billion in new production and cost savings with more modern and transparent approaches.

Promoting Women’s Empowerment in the Kingdom of Jordan
Based on an energy sector-wide gap analysis and discussions with women in the industry, designed a leadership program with networking and professional development in Central, North, and South Jordan; a pilot mentoring program; and Women in Energy organization, promotion, and documentation that tripled the number of women in Ministerial leadership positions over four years.
Technology-Driven Operation Support

Energy Security Analysis at U.S. Navy’s OCONUS Bases
Implemented Deloitte’s Energy Security Scope solution to synthesize and analyze installation infrastructure, energy, and utility meter data at 71 Navy installations. Analysis resulted in tailored strategies to resolve identified energy resilience, reliability, and efficiency performance gaps, yielding $1.8 billion of appropriated and financed new start energy security projects for the U.S. Navy.

Utility Modernization and Customer Service Improvement in Papua New Guinea
Supported the implementation of a customer survey and database cleansing activity targeting the national utility’s 7,800 largest customers (comprising more than 75% of revenue) to improve cash flow, mitigate losses, and improve billing. Prepared the utility for a smart meter modernization program and facilitated improved customer management.

Electrification Planning and Market Expansion in Southern Africa
Implemented geospatial analytics to develop and maintain geospatial tools with electricity entities in Malawi, Mozambique, and Zambia to support government electrification planning. As a result, more than 20 local off-grid private sector actors were equipped to develop and execute expansion strategies to bring power to new customers.
Our Footprint

North America
- DOE (Department of Energy) National Energy Technology Lab Mission Execution and Strategic Analysis
- Department of Interior (DOI) Energy, Extractive, and Renewable Energy Consulting Services
- Department of State (DOS) Energy Governance, Reform, and Development BPA
- USAID Power Africa and Energy II IDIQs

Europe
- DOE Baltics 3+1 Energy Dialogue
- USAID Georgia Energy Program
- DOS Greenland Energy Sector Governance and Renewables
- DOS Sustainable Unconventional Gas Development in Ukraine

Middle East and North Africa
- USAID Energy Sector Support Activity (Jordan)
- USAID Strengthening Utilities & Promoting Energy Reform (Iraq and Global)

Caribbean
- USAID Caribbean Clean Energy Program
- DOS Caribbean Energy Security Initiative Guarantee Program

Latin America
- DOS Andean Electricity Sector Development
- DOS Ecuador Technical Assistance for Energy Development
- DOS Technical Assistance in Renewable Energy and System Planning in Argentina

Sub-Saharan Africa
- USAID Southern Africa Energy Program
- USAID Unlocking Southern African Solar
- USAID Nigeria Power Sector Program
- USAID West Africa Energy Program
- DOS Technical Assistance for Central Africa Power Pool Investment

Note: Map contains a sample of Deloitte Energy Reform projects and is not comprehensive.
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**Deloitte**

*About Deloitte*  
Deloitte is a professional services organization with a core business practice devoted to promoting economic development and poverty reduction in low- and middle-income countries. We help our clients take on the challenges of sustainable development by offering them insightful services in health care, public sector management, public financial management, information technology, financial sector strengthening, trade and investment, energy, water and sanitation.

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