Economic Consulting Associates

ECONOMICS FOR INFRASTRUCTURE

May 2020
ECA provides economic consulting advice in infrastructure services for governments, regulators, and investors worldwide.
Economic regulatory, commercial and policy advice across four service areas

**Economic Regulation**
- Providing regulatory support to utility regulators
- Calculating cost of service and allowed revenues
- Designing energy and water tariffs
- Assessing cost of capital and utility funding requirements
- Regulating prosumers and offgrid networks

**Markets & Commercial**
- Designing energy market frameworks
- Modelling and simulating utility markets
- Market and regulatory due diligence for infrastructure investments
- Restructuring sectors and institutional frameworks
- Advising on commercial contracts in the utility sector

**Decarbonisation Policy**
- Recommending on renewable energy market integration
- Designing energy efficiency regulation and policy
- Planning low carbon development trajectories
- Developing green urban and mobility frameworks

**Investment Planning**
- Designing least cost infrastructure development plans
- Advising on investment strategies and prioritisation tools
- Forecasting electricity loads
- Drafting energy and water sector masterplans
- Recommending PPP policy and regulation frameworks
Core sector experience in electricity, natural gas, and water & wastewater

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<th>Electricity</th>
<th>Specialised advice across the full electricity value chain on regulatory frameworks, tariff levels and structures, power market design, market rules, and investment appraisals</th>
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<td>Natural Gas</td>
<td>Support focused on transmission, distribution, storage, and LNG terminals providing services in pricing, sector restructuring, regulatory frameworks, masterplans and quantification of the economic value of gas</td>
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<td>Water &amp; Wastewater</td>
<td>Assistance in designing water tariffs, developing investment plans, supporting in the set-up of regulators and providing capacity building and training courses to strengthen government and regulator’s capabilities</td>
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‘Structured solutions supported by quantitative analysis drawing on conceptual insights offered by economics’
ECA senior experts

RAY TOMKINS
Chairman

Ray established ECA in 1997. His professional career spans 35 years and includes founding the Energy Policy Research Group at Imperial College, University of London and the energy and environment practice at ERM and London Economics. He leads much of ECA’s gas sector work and due diligence work.

FRED BEELITZ
Managing Director

Fred is experienced in energy policy issues and infrastructure economics. He covers financial analyses, pricing, energy masterplan studies and regulatory economics. His area of expertise is natural gas markets, where he advised Governments, investors and regulators on a range of economic issues.

PAUL LEWINGTON
Director

Paul has over 25 years’ experience as an energy economist. He is an expert in electricity regulatory economics advising utilities and regulatory agencies, on energy pricing and tariff design, regulatory frameworks and the creation of utility regulators.

PETER ROBINSON
Director

Peter has over 30 years’ experience as a consultant in energy, water and telecoms. Based in Zimbabwe for many years, Peter relocated to London in 2007 and maintains a strong focus on Africa. He has worked with senior officials in many countries and has advised several regional institutions on the delivery of urban and water services.

WILLIAM DERBYSHIRE
Director

William has 15 years’ experience in consulting on utility regulation and energy markets. He has been a long-term advisor to the electricity regulatory agencies in Kosovo and Vietnam as they introduce new power markets. William is based in our Bangkok office.

NICK HARALAMBOPoulos
Director

Nick is an economist with a comprehensive understanding of the utility sectors and has 20 years of experience. He has focused on the assessment of energy projects and markets, while continuing to work on market design, energy pricing and regulatory issues. Nick is heading our Athens office.
Selected ECA projects in Europe

UK electricity and gas price control reviews, *Ofgem*

Ionian-Adriatic Gas Pipeline economic and commercial feasibility, *WBIF*

Turkey CCGT regulatory and market due diligence, *confidential*

Economic cost of disrupted gas in the EU, *ACER*

EU electricity TSO and DSO allowed revenues, *ERRA*

Ireland electricity market rules, *CER and NIAUR*

UK Water company quality based incentive mechanisms, *Ofwat*

UK-Europe gas interconnector assessment, *Ofgem*

UK water company cost of capital, *CCWater*

WACC for electricity networks in Greece, *RAE*

Energy efficiency policy and regulation in the West Balkans, *EBRD*

Tariff methodology for Ancillary services in Ukraine, *Energy Community Secretariat*
Selected ECA projects in South East Asia

Indonesia water supply and PPP framework, *World Bank*

Advisory services on the competitive electricity market in Vietnam, *ERAV*

Pakistan gas sector restructuring, *World Bank*

Net metering in Sri Lanka, *IFC*

Electricity tariffs and incentive based regulation in Malaysia, *ST*

Singapore gas tariff methodology, *EMA*

Indonesia electricity cost of service study, *World Bank*

Myanmar LNG site options, *confidential*

Financial and economic analysis of solar parks Cambodia, *EDC*

Low Carbon energy pathways Philippines, *World Bank*

PPP toolkit for India, *World Bank*

Mongolia Urban Air Quality, *ADB*
Selected ECA projects in Africa

- Cost of service and tariff study Tanzania, EWURA
- Regional power dispatch model for SAPP, IFC
- Cubango-Okavango river basin investment analysis, OKACOM
- Ghana Gas Masterplan, Ministry of Energy

- Development of policy and regulatory framework for mini-grids in Kenya, Ministry of Energy
- Gas to power assessment in SSA, World Bank
- Solar power plant feasibility study in Namibia, confidential
- Market assessment of solar appliances, World Bank

- Zambia sanitation policy and regulation, World Bank
- Establishment of energy regulator, Zimbabwe, World Bank
- Rural electrification pre-feasibility studies Mozambique, DfID
- Uganda water tariffs and affordability, National Water & Sewerage Company
Selected ECA projects in Middle East

- **Saudi Arabia water and wastewater tariffs, ECRA**
- **Electricity wheeling charges, Jordan, AFD**
- **Private sector participation in electricity transmission, Iraq, World Bank**
- **Israel CCGT revenue projections, confidential**
- **Electricity cost of service study, Lebanon, World Bank**
- **Support in PPA contract negotiation, confidential**
- **Egypt electricity sector reform, World Bank**
- **Gas distribution and LPG regulation, Saudi Arabia, Government of Saudi Arabia**
- **Israel gas transmission and distribution regulation, NGA**
- **Expert witness for gas export valuation in the Middle East, confidential**
- **Egypt gas flaring regulation, EBRD**
- **Gas sector development plan, Lebanon, LPA**
Latest ECA Viewpoints

Electricity Network Planning in an uncertain world: lessons learned from GB’s evolving process

GB gas market neither shaken no stirred by Rough storage closure

Avoiding negative electricity prices: what measures should TSOs take?

Batteries: modelling value in alternative markets

Energy efficiency obligation schemes – the exit plan

The price for solidarity: gas valuation during disruptions in the EU

Avoiding energy network tariff spikes

Private sector participation models in electricity transmission

The transformative potential of power supply to mines