



# Economic Consulting Associates

## ECONOMICS FOR INFRASTRUCTURE



February 2020

# Worldwide infrastructure economic consultants specialised on energy and water sectors

**20 years**  
in business

**60+**  
assignments  
annually

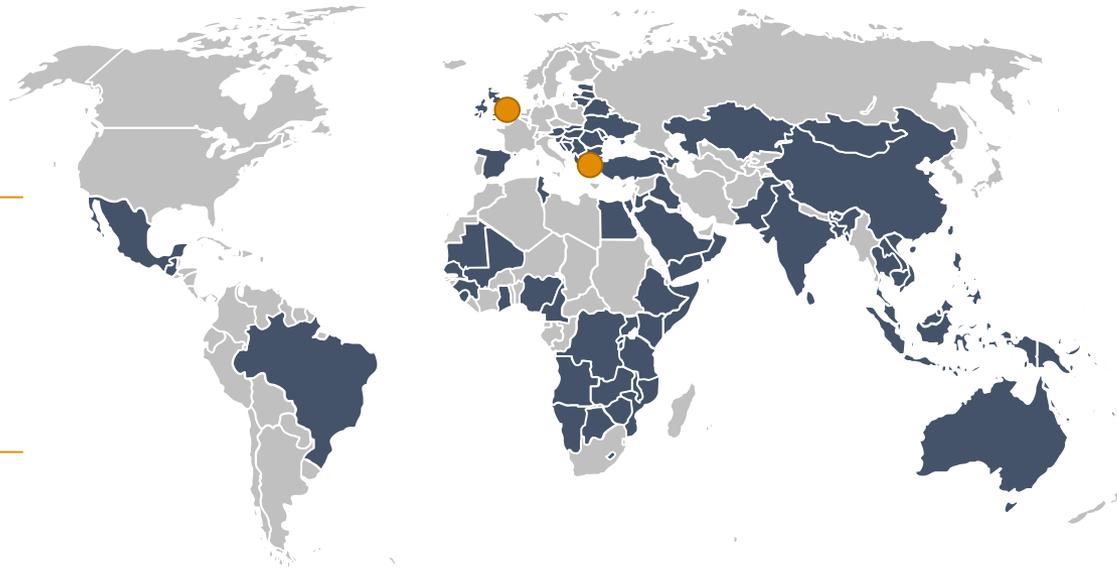
**15+ years**  
average  
experience

**26**  
Economists

**100%**  
Employee owned

**40+**  
Regulators  
advised

**2**  
Locations



**65+**  
Countries worked  
in

**20+**  
National utilities  
advised

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
- Restructuring sectors and institutional frameworks
- Advising on commercial contracts in the utility sector



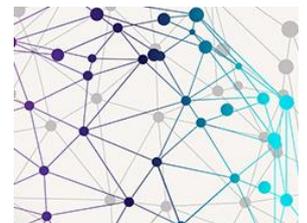
## Decarbonisation Policy

- 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

## Electricity

Specialised advice across the full electricity value chain on regulatory frameworks, tariff levels and structures, power market design, market rules, and investment appraisals

## Natural Gas

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

## Water & Wastewater

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



*'Structured solutions supported by quantitative analysis drawing on conceptual insights offered by economics'*

# ECA senior experts

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**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

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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*

# Selected 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**



**Successful WSS programmes: it's not about the money**



**Private sector participation models in electricity transmission**



**The transformative potential of power supply to mines**

# Selected clients



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