

Report Finds 124 Countries in Need of New Energy Architecture

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- Report assesses the energy systems of [124 countries](#), with in-depth case studies on [India](#) and [Japan](#)
- The existing energy architecture is inadequate for balancing economic, environmental and energy security needs
- Country-specific approach is needed to enable effective transformation
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Geneva, Switzerland, 23 April 2012 – The energy systems of [124 countries](#) are currently not ready for a transition to a sustainable and secure energy architecture required to harness economic growth, according to the report *New Energy Architecture: Enabling an Effective Transition*, released today by the World Economic Forum.

The way energy is produced, distributed and consumed is currently undergoing fundamental change of almost unprecedented proportion. The report estimates that US\$ 38 trillion of global investment in energy supply infrastructure is required by 2035 to keep up with an added 40% rising energy consumption in the same time span.

The [report](#), produced in collaboration with Accenture, reveals that countries which are managing the transition to a new energy architecture will have to deal with trade-offs and difficult choices, ranging from Germany's nuclear shutdown following the Fukushima disaster and Nigeria's removal of energy subsidies, to France's ban on hydraulic fracturing. The report adds that Petro-states continue to struggle to maximize the value of their assets in a sustainable manner that supports economic diversification. Meanwhile, countries in the developing world are focusing on economic growth and development, often at the expense of environmental sustainability, while a number of nations continue to struggle to supply citizens with basic energy needs; estimates show that 1.3 billion people worldwide are still without access to electricity at all.

"Never before have we experienced such pressure for change in the way we source, supply and consume energy," explained **Roberto Bocca**, Senior Director, Head of Energy Industries, World Economic Forum. "Decision-makers must understand how they are being impacted by the changing dynamics and how they can effectively create desired change, especially as the choices they make will determine the speed, direction and cost of the transition."

Two in-depth country studies on India and Japan highlight practical applications that can lead to a new energy architecture. The [study on India](#) underlines the challenges posed by supply bottlenecks, which present a considerable risk to the nation's growth story, and suggests that India considers creating a unified energy regulator to support the expansion of its renewables sector, promote the development of decentralized distribution and generation to expand energy access, and

rationalize energy prices through the gradual phase-out of subsidies.

The [study on Japan](#) underlines the “crisis of confidence” currently faced in its energy sector and suggests that the country considers establishing a fully independent regulatory agency, complete a full cost benefit analysis of market liberalization in the electricity sector and support the development of pan-Asian energy infrastructure.

“The scale and complexity of the energy industry demands a patient and incremental approach to managing change,” said **Arthur Hanna**, Managing Director, Energy Industry, Accenture, United Kingdom, and Member of the World Economic Forum’s Global Agenda Council on New Energy Architecture. “Our approach helps nations take stock of their energy architecture challenges and identify practical and cost-effective solutions.”

The [New Energy Architecture](#) report outlines a methodology designed to assist decision-makers in driving an effective transition. While there is no one-size-fits-all solution, the report highlights different archetypes of change for nations to: *rationalize* and re-organize their mature energy systems; *capitalize* on significant hydrocarbon reserves; *grow* their energy supply to support economic expansion; and *access* basic energy services at affordable prices. To achieve long-term objectives countries within each of the archetypes, enabling environments need to be created through policy initiatives, technology, infrastructure, market structures and human capacity, all connected by the flow of information.

About the New Energy Architecture: Enabling an Effective Transition

The *New Energy Architecture* report benefited from the guidance and support of the Forum’s Industry Partners and the Global Agenda Council on New Energy Architecture. It was produced in collaboration with Accenture. The views expressed in the report do not necessarily reflect those of the advisers to the project. The report includes perspectives from high-level representatives of industry, government, non-governmental organizations and academia. The following contributed to the report:

- **Jim Kelly**, Global Head of Energy Efficiency, ABB
- **Arthur Hanna**, Managing Director, Energy Industry, Accenture
- **Rhonda I. Zygocki**, Executive Vice-President, Policy and Planning, Chevron Corporation
- **Fred Krupp**, President, Environmental Defense Fund
- **Anant Gupta**, President, HCL Technologies Infrastructure Services Division,
- **Juergen Arnold**, Research and Development Director, ESS EMEA, Hewlett-Packard Company
- **Gabriel Barta**, Head of Technical Coordination, International Electrotechnical Commission (IEC)
- **Maria van der Hoeven**, Executive Director, International Energy Agency
- **Juan Carlos Castilla-Rubio**, Chief Executive Officer, Planetary Skin Institute
- **Wes Frye**, Chief Development Officer (Energy), Planetary Skin Institute
- **Simon Henry**, Chief Financial Officer, Royal Dutch Shell
- **Gao Jifan**, Chairman and Chief Executive Officer, Trina Solar (TSL)

Notes to Editors

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