

World Energy Trilemma

Terms of Reference 2013-2016

The World Energy Trilemma report series acts as a catalyst in building dialogue, sharing best practices and fostering a clear vision for sustainability among energy leaders. With the Energy Sustainability Index the work also provides an independent ranking of country's energy and climate policies, including a scoring metric, which enables policymakers to identify trade-offs that exist with the energy trilemma in their country.

A. Introduction – The World Energy Trilemma

Creating policies that simultaneously deliver secure, affordable, and clean energy is one of the most important challenges facing policymakers today. This triple challenge is known as the 'energy trilemma'.

Over the past few years, the World Energy Trilemma reports have examined the drivers and risks preventing the development of sustainable energy systems and the challenges in creating policies that balance the three often conflicting aspects of the energy trilemma.

The report findings are based on three main sources of research i) interviews with public and private decision makers from more than 40 different countries, ii) supporting policy review, and iii) empirical data analysis to develop the Energy Sustainability Index.

The Energy Sustainability Index has proved to be good a catalyst for dialogue and the lessons learnt guide many discussions. The Index provides a snapshot of the status quo by comparatively ranking countries in terms of their ability to provide a secure, affordable, and environmentally-sustainable energy system. The Index illustrates the trade-offs that exist with the energy trilemma and points to key areas that countries must give extra attention to in order to further develop a balanced energy profile and minimize the uncertainties and risks associated with an unbalanced approach.

To balance these trade-offs the reports explore the causes of the energy gaps, the challenges in meeting the energy trilemma and the actions that need to be taken in order to achieve sustainable energy systems.

In the 2012 report, World Energy Trilemma: Time to get real – the case for sustainable energy policy, energy industry CEOs and senior executives from across the sector and around the world set out the necessary policy frameworks to support the development of sustainable energy systems and to unlock much-needed investment. In the 2013 report, World Energy Trilemma: Time to get real – the case for sustainable energy investment, energy and environmental ministers, policymakers and government officials identified what they want the energy industry to do. Furthermore, high-level representatives from multilateral development banks and inter-governmental organizations provided input and indicated where governments and the energy industry need to take action to tackle the energy trilemma.

The 2013 Agenda for Change – published and discussed widely at the 22nd. World Energy Congress – set out 10 agreed areas for energy leaders to focus policies and resources on, to capture the opportunities and meet the needs of citizens and consumers.

B. Objective - From bench-marking to process

To deliver the necessary transformation of the energy system the lessons learnt from the World Energy Trilemma work and Energy Sustainability Index need to be considered and applied when countries change or develop their energy systems.

For that reason the Trilemma report will continue to inform governments and policymakers to enable them to choose policies and measures that will lead to a sustainable energy system. Building on and consolidating the work of previous years, the Study Group will explore opportunities to engage with a small number of countries to consider how the framework of the Trilemma can become part of and guide their transformation processes. In that respect the Trilemma framework may be used to help structure the dialogue between public and private stakeholders, identify and isolate the key issues, and support the path to action and solutions.

Furthermore the Trilemma work will continue to engage with other stakeholders such as the private sector, intergovernmental organizations, and multilateral development banks to foster a clear vision for energy sustainability. The recommendations made may for example guide policies and measures implemented to meet the new UN development goals or the targets that may be agreed on at COP-21 in Paris in 2015.

The Study Group will work to meet the following four supporting objectives:

1. **Capture the perspectives of other stakeholder groups:** The energy trilemma is broadly recognized and has become a primary concern for heads of state. It has been acknowledged that solving the energy trilemma requires a sustainable policy that endures over time, requiring a partnership between energy industry and government. While the 2012 and 2013 work has shown there is a lot of common ground between energy industry and government, the agenda for change highlighted that their needs to be an increased involvement with and engagement of other stakeholders such as the financial community and consumers.
2. **Move from a scoring to a rating system:** The Energy Sustainability Index illustrates the trade-offs that exist with the energy trilemma – energy security, energy equity and environmental sustainability. It bench-marks countries against one another by providing a comparative ranking and a balance score derived from a normalized set of indicators. It points to key areas that countries must pay extra attention to in order to further develop a balanced energy profile and minimize the uncertainties and risks associated with an unbalanced approach. The Energy Sustainability Index has been challenged by many experts for various reasons. Nevertheless, it has proved to be one of WEC's most visible communication tools. To make the Index an even more valuable, widely-used tool to the various stakeholder groups it has been agreed to develop Index 2.0.
3. **Move from dialogue to multilateral discussions:** The WEC's work on the World Energy Trilemma continues to support the evolving dialogue with governments, policymakers and regulators, the private sector as well as multilateral development banks and other international organizations to develop knowledge and understanding of effective strategies and policies and thus to deliver the necessary transformation of the energy system. The multilateral discussion amongst government leaders on challenges and strategies to overcome the energy trilemma piloted at the 22. World Energy Congress will be continued on a regular, bi-annual basis, for example, at World Energy Leader summits, at the Clean Energy Ministerial and so on.
4. **Integrate, strengthen, and regionalize:** It is WEC's aim to integrate and further strengthen the existing activities beyond the 2013 World Energy Congress. The Study Group will use the WEC Scenarios, which show two extreme paths until 2050, to illustrate the impact of making energy policy choices. Furthermore, the Study Group will continue to use the results of other WEC work streams such as World Energy Resources and Energy Efficiency. The Congress was a good opportunity to move to a next content deepening phase, which is the regionalization of global flagships. The Study Group will explore and pursue opportunities to conduct regional or country deep dives.

C. Work Programme 2014-2016

The Study Group will explore opportunities to engage with a small number of countries how the framework of the Trilemma can become part of and guide their individual transformation processes. At the 2016 Congress we want to report on how countries have used the Trilemma framework as part of their transformation process.

Furthermore, the Trilemma Study Group will produce two annual reports, the World Energy Trilemma and its companion the Energy Sustainability Index report. Reports will be completed by October 2014, 2015 and 2016.

1. **World Energy Trilemma report:** Over the past couple of years a series of linked reports has been created that helped the WEC to build a brand around the World Energy Trilemma, but also positioning the WEC itself. Future reports should therefore continue the 2012-2013 report series by picking up the most important issues identified in the Agenda for Change report.
 - a. **2014 report – engagement with financial community:** Government officials, policymakers and energy industry representatives pointed to a group of stakeholders critical to enabling the transformation to sustainable energy systems: the financial sector. Cumulative investment of US\$37 trillion is needed in the world's energy supply system over the next 25 years. Ultimately, to encourage investments, energy projects must have an attractive risk-return profile to meet the competition for capital. Energy leaders called for greater engagement with the financial sector to ensure potential investors have the necessary knowledge of the opportunities and risk management mechanisms to support necessary investments in the energy sector.
 - b. **2015 report:** TBD.
 - c. **2016 report:** TBD.
2. **Energy Sustainability Index:** The Index has proved to be one of WEC's most visible communication tools and a catalyst for dialogue.
 - a. The Study Group will continue to produce the annual Energy Sustainability Index report which includes general Index analysis, regional breakdowns and country profiles. The improved methodology introduced in 2013 that included almost 130 WEC and non-WEC member countries will remain unchanged in 2014 and 2015.
 - b. In preparation of and in time for the 23. World Energy Congress in Turkey the Study Group will develop Index 2.0 together with WEC Member Committees, users of the Energy Sustainability Index, and other partners. A separate Terms of Reference will be developed by 30 June 2014.

D. Modus Operandi

The Trilemma project team will continue to use data and information obtained from the WEC membership network, expert international organisations and other sources, e.g., dedicated project partners. Also other WEC databases and knowledge networks will be used as required. It is envisaged to work closely with other WEC flagships, such as the World Energy Resources and the World Energy Scenarios work to ensure greater consistency across WEC work streams.

The Study Group and its Executive Chair will work closely with the project team, project director and project manager to support the timely preparation of project deliverables.

The Study Group will meet 4-6 times per year, physically and/or virtually.

E. Roles and Responsibilities

There are two key bodies that participate in the development of the World Energy Trilemma report 1) the Study Group and its Executive Chair, and 2) the Project Team. Several other WEC groups support the work.

1. The Study Group:

- a. The Study Group consists of approximately 30 Member Committee representatives, an Executive Chair and the Project Team.
- b. Study Group members commit to regular, prepared participation in meetings.
- c. The Study Group will provide overall guidance and input to the Project Team and give project support where appropriate (e.g. contribute country examples and short summaries).
- d. At key report milestones, the Study Group members provide feedback on key conclusions, recommendations, messages, and draft reports.
- e. Study Group members agree to support outreach activities to own stakeholders / network where possible.
- f. Study Group members will be recognized for their support in the final report.

2. The Project Team:

- a. The Project Team consists of the WEC Secretary General and WEC Studies Committee Chair (ex officio), the Senior Director Scenarios and Policies, the World Energy Trilemma Executive Chair, a Project Coordinator reporting into the Project Director as well as 2-3 team members from project partner Oliver Wyman.
- b. The Project Team is responsible for conducting the research, subsequent analysis, and preparing various versions of the report leading to the final version.
- c. The Project Team will provide information on meetings as well as supporting material in a timely fashion.
- d. The Project Team may call upon other groups within WEC such as other WEC flagships and WEC Knowledge Networks, WEC Standing Committees and other experts to provide feedback and guidance in their area of expertise on the work and its conclusions, and to ensure conclusions are consistent with or shapes the WEC position on the specific subject matter.
- e. The Project Team will engage the WEC Communications Team in the process, and jointly plan and prepare the release of the reports.
- f. Project Team members will be recognized in the final report.

3. The Executive Chair:

- a. The Executive Chair serves as the public spokesperson of the World Energy Trilemma.
- b. As the interface between the Studies Committee Chair and the Study Group, the Executive Chair will lead the work of the Study Group within the bounds of the Terms of Reference and is responsible to the Studies Committee Chair for ensuring that the work is completed on time, meets the expectations of the Studies Committee, ensures an optimal and balanced participation from WEC regions and across energy sectors, is technically robust and credible, is reflective of the work done by the Study Group and is consistent with or shapes the WEC position on the specific subject matter.
- c. The Executive Chair facilitates meetings, considering various cultures and backgrounds and achieving consensus.
- d. The Executive Chair will be recognized in the final report and has the opportunity to provide a foreword to the World Energy Trilemma report.

F. Deliverables

The WEC trilemma project team will continuously reach out to key stakeholders, conduct presentations, support national and regional workshops and expert meetings on topics of special interest and so on. Every effort will be made to encourage broad use of the trilemma work by members, governments and others.

The Trilemma Study Group will produce two annual reports, the World Energy Trilemma and its companion the Energy Sustainability Index report. Reports will be completed by October 2014, 2015 and 2016. Activities will be planned in line with the scope of work identified in Section C above with room for changes and amendments if needed

Furthermore, the Study Group will develop i) major conclusions and recommendations for policymakers, ii) main messages for the annual "World Energy Insight" publication, iii) a collection of opinions where appropriate, and iv) statements from key stakeholders on current energy topics where appropriate. As it achieves appropriate milestones, the Study Group will also prepare articles for ad-hoc WEC media releases.

G. Team Resources

The Trilemma Project Team consists of the WEC Secretary General and WEC Studies Committee Chair (ex officio), the Senior Director Scenarios and Policies, the World Energy Trilemma Executive Chair, 1.5 full time WEC staff members (a Project Coordinator reporting into the Project Director) as well as 2-3 team members from project partner Oliver Wyman.

H. Project Partners

WEC is committed to continue the successful cooperation with its project partner, Oliver Wyman. Additional partnerships will be explored where appropriate.