



Thursday, February 3, 2011

HIGHLIGHTS

THE ENERGY REPORT

OVERVIEW

According to the best science, to avoid the worst effects of climate change, we must reduce greenhouse gas emissions by 80% below 1990 levels globally by 2050. In *The Energy Report*, WWF outlines the most far-reaching scenario for how the world can transition to providing nearly 100 per cent of its global energy requirements from renewable sources by 2050.

WWF'S VISION

“By 2050, we could get all the energy we need from renewable sources. This report shows that such a transition is not only possible but also cost-effective, providing energy that is affordable for all and producing it in ways that can be sustained by the global economy and the planet. The transition will present significant challenges, but I hope this report will inspire governments and businesses to come to grips with those challenges and, at the same time, to move boldly to bring the renewable economy into reality. There is nothing more important to our ability to create a sustainable future.”

- James Leape, Director General, WWF International

ACHIEVING 100% RENEWABLE ENERGY BY 2050

- **Imperative and urgent:** It is essential that we move to maximum use of renewable energy and top energy efficiency as quickly as possible - our current dependence on fossil-based fuels is the most significant contributor to climate change.
- **Possible:** The Ecofys scenario demonstrates the technical potential - a pathway to a fully-renewable global energy system with in-depth analysis into key sectors - such as industry, buildings and transport.
- **Significant impact:** Achieving 100 per cent renewable energy by 2050 will mean more cost effective energy improving quality of life on a global scale. It will have implications in a range of areas including agriculture, forestry and lifestyles that will require attention and management.
- **Requires consideration and debate on challenges:** *The Energy Report* is one scenario among many, highlighting the need for debate and discussion about the various scenarios and options for the transition to sustainable, renewable energy.

WHAT DOES THIS MEAN FOR CANADA?

The world is changing. As an important producer and user of energy, Canada must be prepared to meet changing expectations and demands. Top priorities for Canada include:

- **Investment in conservation and efficiency:** Canada has a valuable opportunity to conserve energy and improve efficiency in everything from government and business policy to material goods. As a northern country with extensive energy needs, Canada will see extensive benefits from these investments.
- **Transition to renewable, sustainable energy:** Canada has great potential for renewable, sustainable energy and is well placed for this transition. These changes require investment on a greater scale than ever before in Canada, and the support of both business and government.
- **Reform of transportation and urban design:** As one of the most urbanized countries in the world, Canada needs to shift to liveable cities with electrified transportation, fuelled by renewable energy. The emissions savings from these changes could have an important role in reducing the impacts of climate change.



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RECOMMENDATIONS FOR A 100% RENEWABLE ENERGY FUTURE

1. **Clean energy:** Promote only the most efficient products. Develop existing and new renewable energy sources to provide enough clean energy for all by 2050.
2. **Grids:** Share and exchange clean energy through grids and trade, making the best use of sustainable energy resources in different areas.
3. **Access:** End energy poverty: provide clean electricity and promote sustainable practices, such as efficient cook stoves, to everyone in developing countries.
4. **Money:** Invest in renewable, clean energy and energy-efficient products and buildings.
5. **Food:** Stop food waste. Choose food that is sourced in an efficient and sustainable way to free up land for nature, sustainable forestry and biofuel production. Everyone has an equal right to healthy levels of protein in their diet – for this to happen, wealthier people need to eat less meat.
6. **Materials:** Reduce, re-use, recycle – to minimize waste and save energy. Develop durable materials. And avoid things we don't need.
7. **Transport:** Provide incentives to encourage greater use of public transport, and to reduce the distances people and goods travel. Promote electrification wherever possible, and support research into hydrogen for shipping and aviation.
8. **Technology:** Develop national, bilateral and multilateral action plans to promote research and development in energy efficiency and renewable energy.
9. **Sustainability:** Develop and enforce strict sustainability criteria that ensure renewable energy is compatible with environmental and development goals.
10. **Agreements:** Support ambitious climate and energy agreements to provide global guidance and promote global cooperation on renewable energy and efficiency efforts.

CHALLENGES AHEAD

WWF recognizes that numerous challenges will need to be addressed on the road to reaching this goal by 2050. We must:

- Find ways to conserve energy without compromising growth or development
- Enable electrification by switching to renewable sources
- Ensure everyone has an equal right to energy
- Limit the impact of land use required to meet energy needs
- Make choices in our own lives to affect energy supplies
- Raise capital to support renewable energy as a viable long-term economic investment
- Make the advances required to achieve the 100 per cent renewable energy vision

ABOUT THE ENERGY REPORT

The Energy Report is a WWF collaboration with energy consultancy Ecofys that explores powering the world entirely by renewable energy by 2050. The result is the most ambitious, science-based examination yet of a renewable and clean energy future on a global scale. *The Energy Report* also discusses the most important challenges and choices that the world will face in realizing a global future powered by 100 per cent renewable energy. It is presented in two parts:

1. A WWF narrative articulating WWF's 100 per cent renewable and sustainable energy vision, and key challenges
2. A technical analysis written by Ecofys, one of the world's leading climate and energy consultancies