

# **SUN DAY CAMPAIGN**

(a campaign for a sustainable energy future)  
6930 Carroll Avenue, Suite #340; Takoma Park, MD 20912  
301-270-6477 x.11  
sun-day-campaign@hotmail.com

## **News Advisory - Analysis**

### **EIA PROJECTS RENEWABLES TO BE 16-27% OF U.S. ELECTRICITY SUPPLY BY 2040**

### **LOW END DOES NOT PASS THE LAUGH TEST; UPPER BOUND PROBABLY STILL TOO CONSERVATIVE**

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**Contact: Ken Bossong, 301-270-6477 x.11**

**Washington DC** – Today, the U.S. Energy Information Administration (EIA) released its renewable electricity generation projections as part of its "Annual Energy Outlook - 2014" [*AEO2014*] (see: <http://www.eia.gov/todayinenergy/detail.cfm?id=16051>).

For the *AEO2014* "Reference case," EIA notes: "Renewable electricity generation in the United States is projected to grow by 69% from 2012 to 2040..., including an increase of more than 140% in generation from nonhydropower renewable energy sources. ... Although nonhydropower renewable generation more than doubles between 2012 and 2040..., [renewable energy's] contribution to U.S. total electricity generation is still just 16%."

Two other scenarios offered by EIA - the Low Economic Growth and the High Oil and Gas Resource cases - suggest even lower penetration rates by renewables.

In the view of the SUN DAY Campaign, these projections do not pass the laugh test.

However, EIA also offers several other scenarios - including the No Sunset and CHG25 cases - in which "renewables account for 24% and 27%, respectively, of total electricity generation in 2040. ... In fact, renewable penetration of electricity supply in both cases meets or surpasses 16% by 2020, which is the level attained in the Reference case by 2040."

Significantly, these latter projections are higher than those presented in the past by EIA. However, while more credible, these scenarios will also almost certainly prove to be unduly conservative.

In fact, based on the actual growth rates for renewable energy sources (i.e., biomass, geothermal, hydropower, solar, wind) over the past decade, multiple other studies, and even analyses from

EIA itself, it is likely that renewables will comprise a much larger share of the nation's electrical generating supply by 2040 -- perhaps two, three or more times higher than the Reference case level forecast by EIA.

There are multiple grounds for challenging EIA's "Annual Energy Outlook" projections - particularly the Reference Case:

\*\* EIA's own published data for the 11-year period January 1, 2003 through December 31, 2013 reveal that the percentage of the nation's net electrical generation represented by renewable energy has expanded from less than 9% in 2004 to nearly 13% in 2013 - i.e., within a decade. Given the relatively consistent growth trends of the past decade or longer for most renewable energy sources and their rapidly declining costs, it seems improbable that it will require another 27 years to grow from 13% to 16%. (see the February 21, 2014 issue of EIA's "Electric Power Monthly," available at <http://www.eia.gov/electricity/monthly>. See, in particular, tables 1.1, 1.1A, ES1.A, and ES1.B)

\*\*To reach 16% by 2040 from 13% in 2013, renewables would only need to expand their current share of the electrical-generation supply by roughly 0.1% per year (e.g., 13.0% in 2013 to 13.1% in 2014 to 13.2% in 2015, etc.). In reality, renewables have expanded their share of the electrical generation supply by an average of 0.4% each year for the past decade. Even EIA's most recent "Short-Term Energy Outlook," issued April 8 with projections for the next two years, suggests an expansion rate closer to 0.3% annually (i.e., 13% in 2013 to ~13.3% in 2014 and ~13.6% in 2015). (see: [http://www.eia.gov/forecasts/steo/report/renew\\_co2.cfm](http://www.eia.gov/forecasts/steo/report/renew_co2.cfm))

\*\*An analysis issued on April 15 by the SUN DAY Campaign suggests that if the trends reflected in EIA data from the past decade continue, renewable energy sources could increase to as much as 13.5% of net U.S. electrical generation in 2014, to 14.4% in 2015, to 15.3% in 2016, and reach or exceed 16.0% no later than 2018 -- i.e., within five years and not the 27 years forecast by EIA. Moreover, dozens of other recent analyses suggest that, in light of rapidly dropping costs for renewables and the need to address climate change, an even faster growth rate for renewables is both possible and probable. (see: <http://www.nirs.org/alternatives/sundayforecast414.pdf>)

\*\* Renewables are dominating new electrical generating capacity. According to the Federal Energy Regulatory Commission (FERC), renewables provided 47% of new electrical generating capacity in 2012 and 2013 combined (see: <http://www.ferc.gov/legal/staff-reports/2013/dec-energy-infrastructure.pdf>). For the first quarter of 2014, FERC reports that renewables accounted for 92% of new electrical generating capacity (see: <http://www.ferc.gov/legal/staff-reports/2014/mar-infrastructure.pdf>). Further, SNL Financial recently reported that renewables now make up more than 56% of the new generation capacity under development (see: <http://www.snl.com/InteractiveX/Article.aspx?cdid=A-27651127-13356>).

\*\* Other recent EIA reports and statements regarding near-term renewable energy growth appear to be inconsistent with the *AEO2014* projections - especially the Reference Case. For example, on Earth Day, EIA reported that over the past four years alone U.S. solar capacity had increased by 418% and now accounts for almost 1.13% of total U.S. electric generating capacity (see:

<http://www.eia.gov/electricity/monthly/update>). The following day, an EIA official noted that 15 gigawatts of additional wind capacity is projected to be added by the end of 2016 - that is roughly a 25% increase (see: <http://www.bna.com/incentives-watch-sharp-b17179889819>). EIA's most recent "Short-Term Energy Outlook" report, issued April 8, also forecasts an increase over the next two years of 2.6% for hydropower, 2.7% for geothermal, and 1.0% for biomass (see: [http://www.eia.gov/forecasts/steo/report/renew\\_co2.cfm](http://www.eia.gov/forecasts/steo/report/renew_co2.cfm)).

\*\* Even the Secretary of the U.S. Department of Energy Ernest Moniz implicitly disagrees with EIA's renewable energy projections. In a March 2014 interview, he was quoted as stating " In the last four or five years, we have seen a doubling of wind and solar. We expect another doubling over the next several years. ... we are looking by 2030 to having a very, very large fraction of our capacity in wind, solar and other renewables ... 30 percent, 40 percent." (see: <http://hereandnow.wbur.org/2014/03/04/ernest-moniz-energy>)

"Unrealistically low forecasts provide ammunition for those arguing that investments in renewable energy are not cost-effective and that new fossil fuel and nuclear construction is necessary because renewables cannot meet the nation's future energy needs," warned Ken Bossong, Executive Director of the SUN DAY Campaign." As such, EIA's projections can have multiple adverse impacts on the renewable energy industry as well as on the nation's environmental and energy future."

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The SUN DAY Campaign is a non-profit research and educational organization founded in 1992 to promote sustainable energy technologies as cost-effective alternatives to nuclear power and fossil fuels.