



100% Renewable Electricity

A new energy storage product developed by FreedomWorks, LLC will create 100% Renewable Electricity, or 100%RE at the proposed P-14889 PSH Project. 100%RE allows large power consumers—governments, businesses and residential customers—to switch to real 100% renewable energy, available 24-hours a day, 7-days a week, 365-days a year. In the past, large organizations have struggled to achieve 100% RE for their worldwide operations. But today large power consumers located in PJM may be able to purchase 100% Renewable Electricity as a turnkey energy service at a guaranteed cost-saving when compared to current electric rates.

FreedomWorks offers customers the opportunity to switch from conventional electricity to 100% RE using P-14889's strategically located storage facilities and power flow modeling.

New P-14889 pump storage hydropower (PSH) will allow more renewable generation on the existing grid, while also helping to reduce the need for new transmission lines. Instead of unscheduled operator curtailments, wind and solar generators will now be able to schedule and send power to P-14889 whenever the wind or sun are generating; and when they're not, P-14889 can discharge their stored energy as firm, balanced, shaped and dynamically scheduled 100% RE delivered directly to the customer. FreedomWorks coordinates all of this in a simple master supply agreement, providing turnkey 100%RE, ready at the switch, combined with a state-of-the-art carbon disclosure and corporate-sustainability accounting system, delivered on-demand.

Proposed P-14889 100%RE Includes:

1. Guaranteed cost savings when compared to current grid supplied power rates;
2. Coordinated long-term wind and solar renewable energy supply, delivery and transmission contracts to provide P-14889 PSH shaped, firm, balanced, and dynamically scheduled energy built-in with ancillary services direct to 100%RE customers;
3. Wind and solar power supply and transmission contracts that hedge against future price increases by incorporating extensive use of renewable energy forecasting tools, and the Internet-of-things (IoT) to plan and operate wind and solar generation resources, especially unit commitment and economic dispatch, into the transmission Energy Management System;
4. The P-14889 PSH system—the first-of-its-kind PSH system specifically designed from the ground-up to generate 100%RE—with more flexibility, including larger turndown for partial power operation, faster ramp-rates, and improved fast-start and stop capability;
5. P-14889 100%RE with energy storage and demand response to compensate for wind and solar variability, along with the service of important grid support functions such as load following, voltage regulation, frequency support, loss-compensation service, load-dispatch services including down reserves, synthetic inertia and black start;
6. Cradle-to-grave coordinated third-party certification and accountability for each renewable energy electron generated, and each CO₂e environmental attribute, with all relevant climate data available securely on-line, to facilitate accurate updates and customized GHG emissions reporting, matched side-by-side with selected consumption data for individual meters and locations.