



Republic of the Philippines
DEPARTMENT OF ENERGY

DEPARTMENT CIRCULAR NO. _____

**Providing Rules And Guidelines Governing The Establishment Of The
Renewable Portfolio Standard (RPS)**

WHEREAS, Republic Act No. (RA) 7638 or the “Department of Energy (DOE) Act of 1992” declares as a policy of State, among others, to ensure a continuous, adequate, and economic supply of energy through the integrated and intensive exploration, production, management, and development of the country’s indigenous energy resources;

WHEREAS, RA 9136 or the “Electric Power Industry Reform Act” (EPIRA) provides that it is the declared policy of the State to ensure the quality, reliability, security and affordability of the supply of electric power;

WHEREAS, RA 9513 or the “Renewable Energy Act of 2008” (RE Act) provides that it is the declared policy of the State to increase the utilization of renewable energy (RE) by institutionalizing the development of national and local capabilities in the use of RE systems, and promoting their efficient and cost-effective commercial application by providing fiscal and non-fiscal incentives;

WHEREAS, the EPIRA mandates the DOE to encourage private sector investments in the electricity sector and promote the development of indigenous and RE resources;

WHEREAS, Section 6, Chapter III of the RE Act provides that all stakeholders in the electric power industry shall contribute to the growth of the RE industry in the country;

WHEREAS, Rule 2, Part II of the Implementing Rules and Regulations (IRR) of the RE Act provides that the RPS as a policy mechanism which places an obligation on electric power industry participants such as generators, distribution utilities, or suppliers to source or produce a specified fraction of their electricity from eligible RE Resources;

WHEREAS, the DOE conducted public consultations and Technical Working Group meetings on the proposed rules governing the establishment of the RPS nationwide from 2011 to 2013;

WHEREAS, on 26 June 2015, the DOE issued Department Circular No. DC2015-07-0014 or the “Guidelines for the Policy of Maintaining the Share of RE in the Country,” a policy adopting at least thirty percent (30%) share of RE in the country’s total power generation capacity through the holistic implementation of the Feed-in Tariff (FIT) System and other pertinent provisions under RE Act and its implementing rules and regulations;

WHEREAS, in light of the robust developments in the exceeding installation targets for solar and wind for the period, the National RE Plan (NREP) is presently undergoing review and updating;

WHEREAS, Part II Rule 2 of the IRR of the RE Act provides that the DOE will issue the RPS upon the recommendation of the National Renewable Energy Board (NREB);

WHEREAS, in a letter dated 10 May 2016 the NREB endorsed and recommended to the DOE the proposed RPS Rules with revisions on the minimum incremental percentage of RE through NREB Resolution No. 3, series of 2014;

WHEREAS, the Philippines is committed to reduce emission as a signatory to the Paris Agreement which aims to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties and to undertake rapid reduction in the context of sustainable development and efforts to eradicate poverty; and

WHEREAS, on 16 June 2016, the DOE conducted a final public consultation on the revised RPS Rules reflecting these developments.

NOW THEREFORE, upon the recommendation of the NREB, the DOE hereby issues, adopts and promulgates the following rules and regulations:

RULE 1. GENERAL PROVISIONS

Section 1. Short Title. – This Department Circular shall be known as the “RPS Rules” and shall hereinafter be referred to as the “Circular.”

Section 2. Purpose of the RPS. The RPS Rules is hereby adopted in order to contribute to the growth of the RE industry by diversifying energy supply, spur socio-economic development in rural areas, and help address environmental concerns of the country by reducing harmful emissions.

Section 3. Scope of the RPS Rules. As provided under Part II, Rule 2, Section 4 (c) of the IRR of the RE Act, the scope of this Circular shall include the following:

- a. Types of eligible RE resources, and identification and certification of generating facilities using said resources;
- b. Yearly minimum RPS requirements upon the establishment of this Circular;
- c. Annual minimum incremental percentage of electricity sold by each Mandated Participant which is required to be sourced from eligible RE resources and which shall, in no case, be less than one percent (1%) of its annual energy demand over the next ten (10) years; and
- d. Means of compliance by the Mandated Participant of the minimum percentage set by the government to meet the RPS requirements.

Section 4. Coverage. Consistent with Section 12 of the RE Act, this Circular shall apply to on-grid areas only with the DOE promulgating a separate issuance for the implementation of RPS for off-grid areas.

Section 5. Definition of Terms. As used in this Circular, the following terms shall be defined as follows:

- a. **“Composite Team”** refers to the team established under Section 16, Rule 5 of this Circular;
- b. **“Contestable Market”** refers to the electricity end-users who have a choice of a supplier of electricity as may be determined by the Energy Regulatory Commission (ERC) in accordance with the EPIRA;
- c. **“Directly Connected Customers (DCCs)”** refers to industrial or bulk electricity end-users, which are directly supplied with electricity by a Generation Company or the Power Sector Assets and Management Corporation (PSALM) or the National Power Corporation (NPC) pursuant to RA 6395 as amended by Presidential Decree No. 395;
- d. **“Distribution Utilities (DUs)”** refers to any electric cooperative, private corporation, government-owned utility or existing local government unit which has an exclusive franchise to operate a distribution system;
- e. **“Embedded Generation”** refers to generating units that are indirectly connected to the grid through the DU’s lines or industrial generation facilities that are synchronized with the grid;
- f. **“Energy Supply”** refers to energy in kilowatt hour (KWh) purchased and generated to meet the total energy requirement of the Mandated Participant;
- g. **“Feed-in Tariff (FIT)”** refers to a RE policy that offers guaranteed payments on a fixed rate per kilowatt hour for emerging RE sources, excluding generation for own use. The FIT rate itself is set and approved by the ERC;
- h. **“Force Majeure”** refers to a typhoon, storm, tropical depression, flood, drought, volcanic eruption, earthquake, tidal wave or landslide or an act of public enemy, war (declared or undeclared), riot, insurrection, revolution, sabotage, blockade or any violent and threatening actions that resulted to extraordinary disruption of the operations of the electric power industry participant;
- i. **“Local Retail Electricity Supplier (Local RES)”** refers to the non-regulated business segment of the DU catering to the Contestable Market only within its franchise area, or persons authorized by appropriate entities to supply electricity within their respective Economic Zones;
- j. **“Mandated Participant”** refers to electric power industry participants mandated to comply with the RPS annual requirement which includes entities enumerated in Rule 3, Section 11 hereof;

- k. **“National Renewable Energy Program (NREP)”** refers to the policy framework provided in the RE Act for the indicative interim targets for the delivery of RE within the timeframe of 2011 to 2030
- l. **“Net Metering”** refers to the policy for two-way connection to the grid wherein a customer is charged net electricity consumption and is credited for any overall contribution from customer-owned RE generation facilities to the electricity grid for the purposes of this Circular;
- m. **“Normalization Procedure”** refers to a statistical process of removing the impact of non-recurring events in the analysis of data;
- n. **“On-grid System”** refers to the electrical system composed of interconnected transmission lines, distribution lines, sub-stations, and related facilities for the purpose of conveyance of bulk power on the grid of the Philippines;
- o. **“RE Certificate (REC)”** refers to a certificate representing all renewable and environmental attributes from one megawatt hour (1 MWH) of electricity generation sourced from a duly registered RE generating unit;
- p. **“RE Market (REM)”** refers to the market where the trading of the RE Certificates is traded;
- q. **“RE Registrar”** refers to the registry of RE Certificates established by the Philippine Electricity Market Corporation (PEMC) under the supervision of the DOE to issue, keep and verify RECs corresponding to energy generated from eligible RE resources;
- r. **“Retail Electricity Supplier (RES)”** refers to any person or entity authorized by the ERC to sell, broker, market or aggregate electricity to the end-users;
- s. **“RPS”** refers to a market-based policy that requires the Mandated Participant to source an agreed portion of their energy supply from eligible RE resources;
- t. **“Supplier of Last Resort (SOLR)”** refers to a regulated entity designated by the ERC to serve end-users in the Contestable Market following a Last Resort Supply Event; and
- u. **“System Operator”** refers to the entity which operates and maintains the transmission network of the Philippine which is presently the National Grid Corporation of the Philippines (NGCP) which was granted a franchise by the Congress of the Philippines in accordance with the provisions of the concession agreement with the Government of the Philippines.

Further, this Circular hereby adopts by reference the definition of terms provided in the EPIRA and RE Act and their respective IRRs.

RULE 2.
RPS POLICY, MINIMUM ANNUAL REQUIREMENT
AND ANNUAL INCREMENT

Section 6. Implementation of RPS Rules. Upon the effectivity of this Circular, the RPS Rules shall be implemented in Luzon, Visayas and Mindanao grids: *Provided*, That the DOE will issue separate rules for the operationalization of RPS in Mindanao until the operationalization of a Wholesale Electricity Spot Market (WESM) in Mindanao: *Provided further*, That public consultation with Mindanao stakeholders and electric power industry participants no later than one (1) year for the effectivity of this Circular will be required.

For purposes of this Section, Luzon, Visayas and Mindanao shall be treated as separate and distinct grids: *Provided*, That the DOE may reclassify the grids.

Section 7. Minimum Annual RPS Requirement. To maintain the RE share in the national energy mix to at least thirty five percent (35%) by 2030, the minimum annual target per grid shall be equal to the sum of the minimum target of all Mandated Participants in the grid. The minimum annual RPS requirement per Mandated Participant shall be computed by the Composite Team in coordination with the NREB: *Provided*, That the annual RPS requirement shall be calculated in accordance with the following formula, all expressed in MWh:

$$\begin{aligned}
 RPS(n) &= RPS (n-1) + AMI(n) \\
 &= RPS_0 + \sum_{n=1}^n AMI(n) \\
 &= RPS_0 + K \sum_{n=1}^n AMI(n-1)
 \end{aligned}$$

Where:

- RPS(n) = RPS for the Year
- RPS(n-1) = RPS for the Previous Year

- RPS₀ = RPS at Year 0 i.e. for the Previous Year before Implementation Year 1
- = Total Net Electricity Sales from all RE Sources at Year Zero

- AMI(n) = Annual Minimum Incremental Generation from Eligible RE Resources for the Year
- = Mandated Minimum Annual Incremental RE% x Net Electricity Sales in Previous Year
- = K x ES(n-1)

- K = Mandated Minimum Annual Incremental RE%
- = Constant RPS% as Set by NREB
- = %

- ES(n-1) = Net Electricity Sales in Previous Year, where Net Electricity Sales is equal to Total Electricity Sales Less System and Other Losses

Provided further, That the Baseline Year shall be the calendar year immediately preceding the start of mandatory compliance as provided in Section 23, Rule 8 of this Circular. A Sample Computation of the Minimum Annual RPS Requirement is provided in Annex "A".

Section 8. Minimum Annual Incremental RE Percentage. The minimum annual increment in the RPS level shall be initially set at 2.15 percent (2.15%) to be applied to the actual total supply portfolio of the Mandandated Participant in each grid for the previous year. This is to determine the current year's requirement for RECs of the Mandated Participant: *Provided*, That the minimum annual percentage may be adjusted by the NREB when:

- a. There are substantial changes in relevant to the market in the grid; or
- b. The set percentage is deemed insufficient to attain the target set by the DOE.

RULE 3. ELIGIBLE RE TECHNOLOGIES AND FACILITIES, AND MANDATED PARTICIPANT

Section 9. Eligible RE Technologies. For purposes of compliance with the RPS, the following RE resources shall be eligible:

- a. Biomass;
- b. Waste to energy technology;
- c. Wind energy;
- d. Solar energy;
- e. Run of river hydropower sources;
- f. Impounding hydropower sources that meet internationally accepted standards;
- g. Ocean energy;
- h. Hybrid systems as defined in the RE Act;
- i. Geothermal energy; and
- j. Other RE technologies that may be later identified by the DOE, through a separate issuance, upon the recommendation of the NREB.

Section 10. Renewable Energy Facilities Eligible for RPS Compliance. The generation from the following RE facilities using said RE resources are deemed eligible for compliance with the RPS:

- a. New installations targeted under the NREP;
- b. Embedded RE power generating facilities;
- c. Existing RE power generating facilities covered in the baseline RPS calculation;
- d. Incremental capacity resulting from expansion of an existing RE power generating facility;
- e. Incremental capacity resulting from the upgrading of an existing RE power generation facility that includes retrofitting, refurbishing or re-powering;
- f. New capacities resulting from a change in the technology i.e., from a non-RE to RE power generation facility e.g., a coal plant that is modified to use agricultural wastes as fuel: *Provided*, That co-firing shall not be allowed;
- g. RE facilities installed in end-user's premises participating under the Net Metering program, as well as RE Self-Generating Facilities;
- h. Mothballed RE facilities that are restored into operation; and
- i. Other RE technologies as may be later identified by the DOE, through a separate issuance, upon the recommendation of the NREB.

Section 11. RPS Mandated Participant. The following entities are mandated to comply with the RPS:

- a. All DUs for all its existing customers and subsequently, upon commencement of the Retail Competition and Open Access (RCOA), for its captive customers;
- b. All licensed RES for the Contestable Market upon commencement of RCOA;
- c. All local RES upon commencement of RCOA;
- d. Any SOLR as may be identified upon commencement of RCOA;
- e. Generating companies only to the extent of their actual supply to their DCCs;
- f. Entities duly authorized to operate as distributors within the economic zones; and
- g. Other entities as may be recommended by NREB and approved by the DOE.

Section 12. Generation RPS Targets. The Mandated Participant shall be guided by the RE generation targets to be determined by the NREB consistent with the targets set in the NREP duly approved by the DOE.

Section 13. Review of RPS. This Circular and the targets set hereunder, as well as the baseline and other relevant requirements, shall be reviewed by the DOE in coordination with the NREB every two (2) years or as may be necessary, in consultation with the stakeholders.

RULE 4. RPS COMPLIANCE MECHANISMS AND RE CERTIFICATE

Section 14. Compliance Mechanisms. The Mandated Participant shall use any one, a combination hereof, or all of the following in complying with this Circular:

- a. Allocation from the System Operator pursuant to the FIT Rules or the relevant rules issued by the ERC therefor. RE Generation allocated by the System Operator pursuant to the FIT Rules shall be used for compliance purposes and cannot be traded;
- b. Generation from Embedded RE power generating facilities, duly certified by the DOE and issued a Certificate of Compliance (COC) by the ERC;
- c. Generation from an eligible RE power generating facility with a Power Supply Agreement (PSA) duly approved by the ERC;
- d. A REC acquired from the REM where the ownership and value per unit shall be defined by the DOE in a separate circular; and
- e. Any generation from Net Metering arrangements.

Provided, that, for purposes of equitably treating Mandated Participants which have, and those Mandated Participants without any, existing RE generating facilities, the baseline RPS requirement shall be distributed among the Mandated Participants in accordance with guidelines to be issued by the DOE pursuant to Section 7 hereof.

Section 15. General Principles on the Establishment of the REM and the RE Registrar. The DOE shall establish the REM to facilitate the issuance, commercialization and verify compliance with the annual RPS requirement. As part of the REM, the PEMC, under the supervision of the DOE shall establish the RE Registrar and shall issue, keep and verify RECs corresponding to energy generated from eligible RE facilities. The following principles shall be considered in the establishment of the rules and guidelines governing the REM and the RE Registrar:

- a. The RE Registrar will issue one certificate per MWh of generation produced from a registered generating unit;

- b. The registration shall be designed so a REC can be claimed only once;
- c. All Mandated Participants shall have registered with the RE Registrar their individual RPS Compliance Accounts;
- d. Excess RECs of the Mandated Participant can be traded pursuant to Section 14 (b), Rule 4;
- e. A REC shall be valid for three (3) years and can be banked only during its validity;
- f. The Mandated Participant may be assessed periodically with corresponding penalties for non-compliance with the RPS requirement consistent with the REC validity;
- g. A Mandated Participant will prove compliance with the RPS by having the proper quantity of RECs in their RPS Compliance Account in the RE Registrar, consistent with Section 8, Rule 2 of this Circular;
- h. During the first three years of the RPS program and every other year thereafter, the DOE shall review the REM Rules for possible revisions based on the rate of compliance of the Mandated Participant, REC market activity and general success in meeting RPS goals; and
- i. A transaction fee may be imposed by PEMC for transactions undertaken in the REM and RE Registrar subject to the setting of operational charges to be approved by the ERC: *Provided*, That a separate issuance will be issued to serve as guidelines for the same.

RULE 5. COMPOSITE TEAM

Section 16. Creation of Composite Team. For the purpose of implementing the provisions of this Circular, a Composite Team is hereby created to be composed of representatives from the following:

- a. Designated representative of the NREB Chair;
- b. Electric Power Industry Management Bureau (EPIMB);
- c. Renewable Energy Management Bureau (REMB);
- d. Legal Services (LS); and
- e. Energy Policy and Planning Bureau (EPPB).

Provided, That the NREB representative shall serve as Chair of the Composite Team.

Section 17. Responsibilities of the Composite Team. The Composite Team shall discharge the following functions under this Circular:

- a. Compute the minimum annual RPS requirement per Mandated Participant, in consultation with NREB as provided under Section 8, Rule 2;
- b. Submit a Compliance Report of Mandated Participants for the RE Registrar as provided in Section 18, Rule 6 after its review and validation for submission to the DOE Secretary copyfurnished the ERC and NREB;
- c. Recommend the suspension of compliance or the carryover of compliance to the RPS of any Mandated Participant as provided in Section 22, Rule 8;
- d. Initiate a study on the cost implication of minimum annual RPS requirement before and after the initial implementation of RPS; and
- e. Such other responsibilities and roles as directed by the DOE. Through a separate issuance.

RULE 6. COMPLIANCE MONITORING

Section 18. Monitoring of Compliance with the RPS. The submission of the Compliance Report by the RE Registrar shall be within an appropriate period to be determined upon the establishment of the RE Registrar. The DOE shall certify the level of compliance of each Mandated Participant.

Section 19. Contents of the Compliance Report. The Compliance Report shall contain among others the following information:

- a. Compliance level of each Mandated Participant;
- b. Total volume of RECs generated;
- c. Total shortfall/excess in RECs, if any; and
- d. Other information that may be required by the DOE.

RULE 7. PROHIBITED ACTS AND SANCTIONS

Section 20. Prohibited Act. Pursuant to Section 35 (a) of the RE Act, non-compliance or violation of the RPS by any Mandated Participant under this Circular shall be subject to the administrative penalties herein provided.

Section 21. Penalties for Non-Compliance with the RPS Rules. Consistent with RE Act, its IRR and this Circular, the following administrative and criminal sanctions may be imposed:

- 21.1 Administrative Liability.** The DOE may impose a penalty ranging from a minimum of One Hundred Thousand Pesos (P100,000.00) to Five Hundred Thousand Pesos (P500,000.00), or upon its discretion

may recommend to the appropriate agency for the revocation of the Mandated Participant's license, franchise or authority to operate.

21.2 Criminal Liability. Without prejudice to any administrative liability, Section 36 of the RE Act provides that upon conviction thereof, any person, who willfully aids or abets the commission of a crime prohibited herein or who causes the commission of any such act by another shall be liable in the same manner as the principal and shall suffer the penalty of imprisonment of from one (1) year to five (5) years, or a fine ranging from a minimum of One Hundred Thousand Pesos (P100,000.00) to One Hundred Million Pesos (P100,000,000.00), or twice the amount of damages caused or costs avoided for non-compliance, whichever is higher, or both upon the discretion of the court: *Provided*, That in case of associations, partnerships or corporations, the penalty shall be imposed on the partner, president, chief operating officer, chief executive officer, directors or officers responsible for the violation.

Provided finally, That in no case shall any fine or penalty imposed on a Mandated Participant under this Circular be charged to any of its customers.

Section 22. Suspension or Carry-Over of Compliance. The DOE may, in any given year, suspend compliance of a RPS Mandated Participant with the Annual RPS Requirement, as the case may be, under any of the following conditions:

- a. Inadequate supply of the eligible RE resources to meet the annual requirement;
- b. Inadequate supply of RECs to meet the annual requirement;
- c. Unavailable capacity at both the transmission and relevant distribution network to transport the eligible RE resource generation to the grid;
- d. Occurrence or existence of Force Majeure affecting or preventing the Mandated Participant from complying with the annual requirements, as the case may be; and
- e. Such other consideration or condition which is outside of the control of the Mandated Participant as may be determined in the implementation of the REM.

In all cases, the Mandated Participant seeking suspension of compliance must demonstrate to the Composite Team that the condition was beyond its control and that it exerted all reasonable efforts to comply, notwithstanding the condition.

Upon recommendation of the Composite Team, the DOE may, in lieu of suspending compliance of the Mandated Participant, allow the Mandated Participant to carry over the compliance shortfall for a period of three (3) years.

Failure of the Mandated Participants to comply with the shortfall by the end of the carry-over period granted shall subject the Mandated Participant to the administrative liability under Section 21.1, Rule 7 of this Circular.

RULE 8.
TRANSITORY AND OTHER PROVISIONS

Section 23. Transition Period. A Transition Period of one (1) year from the commencement of operations of the REM is hereby provided to ensure an orderly, efficient and effective imposition of the RPS Rules. The period will allow the participants to prepare all information and data required in the establishment of the baseline to be determined by the DOE, prepare their respective compliance mechanisms as well as prepare the consumers for the impact of the RPS Rules. Upon the lapse of the Transition Period, mandatory compliance with the RPS shall commence.

Section 24. Reportorial Requirements. The DOE shall establish a reliable database to serve as the baseline in the calculation and monitoring of the compliance of the Mandated Participants: *Provided*, That EPIMB and REMB will coordinate in this regard. To this end, the following entities shall be required to submit within six (6) months from the effectivity of this Circular, the following documents:

- a. All DUs shall submit the following information covering the period that will be defined by the DOE:
 - i. Purchases broken down by generating facility, power source and/or through the WESM;
 - ii. For purchases from the PSALM/NPC, all purchases shall be segregated into RE and non-RE based resources on the proportionate share of the non-Value Added Tax allocation from PSALM/NPC;
 - iii. Output from Embedded Generation facilities, and
 - iv. Such other reports that the DOE may require.
- b. All Generating Companies shall be required to submit data on sales to their DCCs for the period to be identified by the DOE.
- c. The NGCP shall submit for approval of the DOE the following:
 - i. A committed Transmission Development Plan (TDP) that identifies network expansion/rehabilitation to enable delivery of new RE resources to the grid that will include the total investments required to support the RE industry;
 - ii. A list of Transmission Services Agreements and other related transmission services signed between the RE developer and NGCP;
 - iii. A technical study/evaluation on the required incremental ancillary services needed to provide to maintain a reliable power service delivery with the entry of new RE technologies.

- d. Each Mandated Participant shall submit an Implementation/Compliance Plan to the DOE which shall contain the following:
 - i. Existing bilateral contracts, if any, that will be used as mechanism to secure compliance with the RPS Rules;
 - ii. Any existing Transition Supply Contracts (TSCs) that can be used as mechanism to secure compliance with the RPS Rules;
 - iii. Forecast of DU's compliance with the RPS in kWh and corollary kW, which may include, among others, Embedded Generation, bilateral contracts, purchases from the REM and other mechanisms identified as means of compliance herein;
 - iv. Distribution network expansion/upgrade plans for RE Embedded Generation facilities.
- e. Such other reports from any person or entity as may be required by the DOE.

Section 25. Information, Education and Communication Activities to Stakeholders. - Pursuant to Section 31, Rule 10 of the IRR of the RE Act, the DOE, through REMB in coordination with EPIMB, shall develop and implement an intensive and massive information, education and communication (IEC) activities that are designed to increase the public awareness and appreciation of the RPS Rules and the RE industry as a whole.

Section 26. Separability Clause. If any provision of this Circular is declared invalid or unconstitutional, the other provisions not affected thereby shall remain valid and subsisting.

Section 27. Repealing Clause. All issuances, rules and regulations, or part thereof inconsistent with this Circular are hereby repealed, amended or modified accordingly.

Section 28. Effectivity. This Circular shall take effect after its publication in two (2) newspapers of general circulation.

Issued on _____ at Energy Center, Rizal Drive, Bonifacio Global City, Taguig City.

ZENAIDA Y. MONSADA
Secretary

Annex A: Sample Computation

RPS Calculation

RPS % Target		35% by 2030
Projected Annual Growth Rate		5.0%
Mandated Minimum Annual Incremental Percentage of Electricity Sales	K	2.15%
Estimated Total Incremental RE Installed in MW <i>(assuming average 36 % net capacity factor)</i>		10,281 MW

Year	Annual Net Electricity Sales (ES, GWh)	Annual Minimum Incremental RE (AMI)	RPS in GWh	RPS (%age)	Total Incremental Electricity Sales, GWh	RE as a % of Total Incremental Generation
2014	63,354		16,243	25.6%		
2015	66,522	1,362	17,605	26.5%	3,168	43.0%
2016	69,848	1,430	19,035	27.3%	3,326	43.0%
2017	73,340	1,502	20,537	28.0%	3,492	43.0%
2018	77,007	1,577	22,114	28.7%	3,667	43.0%
2019	80,858	1,656	23,770	29.4%	3,850	43.0%
2020	84,900	1,738	25,508	30.0%	4,043	43.0%
2021	89,145	1,825	27,334	30.7%	4,245	43.0%
2022	93,603	1,917	29,250	31.2%	4,457	43.0%
2023	98,283	2,012	31,263	31.8%	4,680	43.0%
2024	103,197	2,113	33,376	32.3%	4,914	43.0%
2025	108,357	2,219	35,594	32.8%	5,160	43.0%
2026	113,775	2,330	37,924	33.3%	5,418	43.0%
2027	119,463	2,446	40,370	33.8%	5,689	43.0%
2028	125,437	2,568	42,939	34.2%	5,973	43.0%
2029	131,708	2,697	45,636	34.6%	6,272	43.0%
2030	138,294	2,832	48,467	35.0%	6,585	43.0%
TOTAL		32,224			74,940	
2031	145,209	2,973	51,441	35.4%	6,915	43.0%
2032	152,469	3,122	54,563	35.8%	7,260	43.0%
2033	160,092	3,278	57,841	36.1%	7,623	43.0%
2034	168,097	3,442	61,283	36.5%	8,005	43.0%
2035	176,502	3,614	64,897	36.8%	8,405	43.0%

Based on:
 63,345 GWh (Actual 2014 Data from DOE Power Stats)
 66,848 GWh (Projected 2015 using draft PDP Growth and Elasticity Assumptions)