

Federal Energy Regulatory Commission
FERC-731 Demand Response/Time-Based Rate Programs and
Advanced Metering

Form Approved
 OMB No. 1902-0251
 Expires: 03/31/2013

GENERAL INSTRUCTIONS AND INFORMATION	
SURVEY PURPOSE	The Energy Policy Act of 2005, Section 1252(e)(3) requires the Federal Energy Regulatory Commission to prepare an annual report, by appropriate region, that assesses demand response resources, including those available from all consumer classes. The FERC-731 survey will provide the Commission with some of the information needed for this report.
RESPONDENTS	The FERC-731 is a voluntary survey to be completed by electric industry participants, including: electric utilities, wholesale power marketers (registered with the Federal Energy Regulatory Commission), energy service providers (registered with the states), electric power producers, unregulated retailers, independent system operators, regional transmission organizations, curtailment service providers and wholesale program customers.
FILING DEADLINE	July 31, 2010 April 30, 2012
HOW TO FILE	File your electronic reply by emailing the completed survey file to DRSurvey@ferc.gov [email address tbd]. FERC will also accept survey responses that are completed in paper format. Mail the paper version of your completed survey to: Federal Energy Regulatory Commission, ATTN: Office of Energy Policy and Innovation FERC-731, 888 First Street, N.E., Washington DC 20426.
QUESTIONS?	Refer to the frequently asked questions (FAQ) document at http://www.ferc.gov/dr-2010-survey [URL tbd] -for answers to questions most often asked in previous surveys. If after consulting the FAQ document you still have questions, call the survey help line at 1-888-585-9232 [toll free number tbd] Monday through Friday from 9:00am to 6:00pm Eastern Time, or send your questions in an email to DRSurvey-help@ferc.gov [email address tbd].
DEFINITIONS OF TERMS USED IN THE SURVEY	Terms in blue appear in the glossary. A file containing the glossary and these instructions is available at http://www.ferc.gov/dr-2010-survey . [URL tbd]
REPORTING PERIOD	Report information for calendar year 2011 2009 .
REPORTING BURDEN	The annual public reporting burden for this information collection is estimated to be an average of four hours per respondent. This burden estimate includes the time necessary for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden , to Federal Energy Regulatory Commission, Attention: Information Clearance Officer Michael Miller (Office of the Executive Director), 888 First Street, NE, Washington, DC 20426 or e-mail to dataclearance@ferc.gov and michael.miller@ferc.gov . If you submit comments to FERC concerning the collection of information and the associated burden estimates, including suggestions for reducing this burden, also send t Those comments and/or suggestions should also be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs, Room 10202-NEOB, 725 17th Street, N.W., Washington, DC 20503 (Attention: Desk Officer for the Federal Energy Regulatory Commission), and should include OMB No. 1902-0251, fax: (202) 395-7285. For security reasons, comments to OMB should also be submitted by email to: oir_submission@omb.eop.gov . A response is not required to this survey unless the collection of information displays a valid OMB Control Number.

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CONFIDENTIALITY

Information reported in the FERC-731 is considered public and may be publicly released in identifiable form.

INSTRUCTIONS AND INFORMATION SPECIFIC TO SURVEY QUESTIONS

<p align="center">Q1</p>	<p>Enter the full legal name of the industry participant (entity) for which the survey is being completed. Your entity's ID was included in the email you received. If you do not have the entity ID, please contact the help line at 1-888-585-9232 [toll free number tbd]. Choose from the drop-down menu, the type of entity for which you are filing.</p> <p>Enter the full name and title of the person that FERC should contact for follow-up information regarding data and responses, as well as the daytime telephone number and fax number of the contact person, including area code, and the contact's email address. If the contact does not have an email address, please enter "no email address" in that space. Enter the mailing address for the survey contact.</p> <p>Enter the same information for the survey contact's supervisor.</p>
<p align="center">Q2</p>	<p>Enter the state and report the number of your entity's advanced meters BEING USED for advanced metering purposes (i.e., the meters measure and record usage data at a minimum, in hourly intervals, and provide usage data to both consumers and energy companies at least once daily) and the number of all meters being used by your entity. (Advanced meters include basic hourly interval meters and extend to real-time meters with built-in two-way communication capable of recording and transmitting instantaneous data.) Report the data as of the end of calendar year 2011 <u>2009</u> <u>by for each of the three customer sectors</u>, for each state. <u>Do not sum the entries of different customer sectors</u>. This information must be provided for all entities.</p>
<p align="center">Q3</p>	<p>If the entity for which you are providing information OFFERS demand response programs or time-based rates/tariffs, please SKIP Q3 and answer the questions that follow beginning with Q4.</p> <p>Provide the number of retail electric customers and retail electric meters your entity has as of the end of calendar year 2011 <u>2009</u>, by customer sector, ONLY if the entity for which you are filing DOES NOT offer any demand response programs or time-based rates/tariffs. Enter the information separately for each NERC regional entity in which your entity operates. If entities are split across regional entity boundaries, please fill out one row per regional entity.</p> <p>If the entity for which you are providing information DOES NOT offer any demand response or time-based rates/tariffs, after answering Q3, YOU ARE FINISHED WITH THE SURVEY. Please submit it to FERC as specified in HOW TO FILE (above).</p>

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<p align="center">Q4</p>	<p>For those retail customers that are provided data concerning the amount and frequency of their electricity use which is measured at least hourly, please provide the number of customers who have the capability to receive these data (whether or not they actually do so) under each of the following methods:</p> <ul style="list-style-type: none"> • Via the Internet - the customer can view its electricity use information by time period, on the Internet on a site provided by your entity or by another entity contracted by your company to provide the information. • On their bills/invoices - the customer is provided with its electricity use information by time interval on its utility bill or invoice. • Via a display unit (for example, an in-home display monitor) - the customer can view or access its electricity use information directly through a network or through a specific device connected to the metering network. This category does not include meters which have the capability of being read (e.g., through pulse output or TCP/IP) where an external display has not been provided.
<p align="center">Q5</p>	<p>Provide your entity's demand response programs and time-based rates/tariffs that were not in use during 20112009 but that are planned to begin during each of the calendar periods 20120, 20131-20142, and 20153-20175 for each program type listed. Enter the number of programs planned for each time period, and the expected potential peak reduction or, for the periods that span more than one year, the average expected potential peak reduction in megawatts. <u>Only list programs in the year in which they are planned to begin. Do not list a program in more than one time period.</u> If your program type is not listed, select "other (describe below)" and briefly describe the "other" program type and provide the expected potential peak reduction or, for the periods that span more than one year, the average expected potential peak reduction in megawatts. Optionally, describe the method(s) used to estimate the potential peak reductions you entered for the planned programs.</p>
<p align="center">Q6</p>	<p>Please provide information for each NERC regional entity/state combination in which the entity operated in the year 20112009.</p> <p>Step 1. Choose a NERC regional entity in which your entity operated from the drop-down menu provided. If your entity operates in Alaska or Hawaii, choose Alaska or Hawaii.</p> <p>Step 2. For the selected NERC regional entity, choose a state in which your entity operated from the drop-down list.</p> <p>Step 3. Repeat steps 1 and 2 for each combination of NERC regional entity and state in which your entity operated. For example, if your entity operated in the Midwest Reliability Organization (MRO) in the states of North Dakota and Minnesota, fill in one row with MRO and ND, then fill in another row with MRO and MN.</p> <p><i>Paper filers note: please list the appropriate combinations in rows on a copy of this page, using additional pages if needed.</i></p>

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Q7

Provide your entity's **number** of retail customers by **customer sector** for the corresponding **NERC regional entity**/state combination selected in Question 6. If your entity does not serve retail customers in a **NERC regional entity**/state, leave the fields in that row blank.

INSTRUCTIONS AND INFORMATION SPECIFIC TO SURVEY QUESTIONS

RETAIL PROGRAMS/TARIFFS:

At the top of the page, enter a NERC Region/state combination where your entity offered a demand response program or time-based rate/tariff directly to RETAIL customers in calendar year 20112009. The NERC Region/state combination entered should be one of the combinations entered in Q6. Enter additional RETAIL programs, if any, on additional copies of this page created with the [Add Page] button.

Customer Sector- From the drop-down list provided, choose the **customer sector** to which a program is offered. The remaining requested data for Q8 should be associated with the **customer sector** selected in this row. (If the program is offered to more than one customer sector, complete Q8 for the selected sector, then click the Add Page button at the bottom of the form. On the new page, enter the program information for another customer sector).

Paper filers note: please make copies of this page and complete one page for each customer sector/program combination offered by the entity.

Program name - Enter a short name for the program that identifies the program/tariff for which you are providing information.

Program description - Provide a short description of the program/tariff, for example: "Critical peak pricing for large residential customers with central A/C with smart thermostats." If available, please also enter the address of a website that describes the program.

Q8

Program type – From the drop-down list provided, choose the program type that most closely matches this program/tariff offered by your entity. (If the entity offers more than one program for the selected customer sector, complete Q8, then click the Add Page button at the bottom of the form. On the new page, enter the information for another program).

Paper filers note: Please see the program types listed on the last page of the glossary.

Number of customers - Enter the number of customers, from the **customer sector** selected in the first row, enrolled in this program/tariff.

Maximum demand of customers (MW) - Report demand in megawatts attributable to the group of customers reported in the preceding row. One megawatt equals 1,000 kilowatts. To convert kilowatts to megawatts, divide by 1,000. This may be reported as it is tracked by your entity, such as hourly, 30-minute demand, 15-minute demand, or 5-minute demand.

Potential peak reduction (MW) - Provide the potential peak reduction in megawatts attributable to the group of customers, from the **customer sector** reported on the first row, in this program/tariff. For utilities, this is the sum of potential demand reduction capability achieved by the program participants at the time of their annual peak load. For **Curtailement Service Providers**, it is the sum of the coincident reduction capability sponsored by the **Curtailement Service Provider** and achieved by demand response program participants at the time of the peak for the region in which they aggregate customer load.

INSTRUCTIONS AND INFORMATION SPECIFIC TO SURVEY QUESTIONS

Q8 (continued)

Realized demand reduction attributed to program (MW) - Provide the actual change in megawatts (MW) (show a demand reduction as positive and a demand increase as negative) due to the Program/Tariff for customers enrolled in this program, in this customer class, during [20112009](#).

Number of times program was called or activated – Enter the number of times during [20112009](#) that this demand response program was called or activated. If the program was not called or activated in [20112009](#), enter zero. If the program does not involve activation (for example, a time-of-use tariff that is always in effect), enter “na”.

Are participants in the program excluded from taking part in other demand response or time-based rates/tariffs? - Indicate whether or not participants in the program you are reporting are prohibited from participating in other demand response programs.

Participation – From the list provided, please select whether participation in the program, or taking service under the rate/tariff, is mandatory, voluntary **opt-out**, or voluntary **opt-in**. Please see the glossary for explanations of the terms opt-in and opt-out.

End Use Equipment Affected – if the program primarily affects specific end uses (for example, direct load control of central air conditioners or water heaters) please list the end use(s).

Amount of Potential Peak Reduction enrolled in RTO and/or ISO programs - Please enter the amount, in megawatts, of the **Potential Peak Reduction** associated with this program enrolled in RTO and/or ISO demand response programs.

Other Comments (please specify) – If you have any other comments that you would like to add regarding this retail demand response and time-based rate program/tariff, please enter them in the space provided.

To add information about another RETAIL program/tariff, click on the Add Page button to create a new blank RETAIL program/tariff page.

To delete the page, click on the Del Page button. Note that the Del Page button will not delete this page if it is the only RETAIL program/tariff page in the form.

INSTRUCTIONS AND INFORMATION SPECIFIC TO SURVEY QUESTIONS

WHOLESALE PROGRAMS/TARIFFS

At the top of the page, enter a NERC Region/state combination where your entity offered a demand response program or time-based rate/tariff to WHOLESALE customers and curtailment service providers in calendar year [20112009](#). The NERC Region/state combination entered should be one of the combinations entered in **Q6**. Enter additional WHOLESALE programs, if any, on copies of this page created with the [Add Page] button.

Program name - Enter a short name for the program that identifies the program/tariff.

Note to paper filers: make copies of and complete Q9 for each program offered by the entity.

Program description - Provide a short description of the program/tariff for example, "Customer Load Control for high load factor industrial customers." If available, please also enter the address of a website that describes the program.

Program type - Choose from the drop-down list provided, the program that most closely matches to the one offered by your entity.

Q9 Potential peak reduction (MW) - Provide the potential peak reduction in megawatts attributable to the group of customers in this program/tariff. For utilities, this is the sum of potential demand reduction capability achieved by the program participants at the time of their annual peak load. For an RTO or ISO, it is the sum of **coincident reduction capability** achieved by participants at the time of system peak of the RTO or ISO.

Realized demand reduction attributed to program (MW) - Provide the actual change in megawatts (MW) (show a demand reduction as positive and a demand increase as negative) due to the Program/Tariff in calendar year [20112009](#).

Minimum reduction (MW) - Enter the minimum megawatt reduction requirement that wholesale customers must meet to participate.

Response time (Hours) - Enter the number of hours wholesale customers are notified before the demand response event begins. If the program does not involve notification, leave blank.

Energy payment for MWh curtailed (\$/MWh) - Enter the amount, in whole dollars per MWh, that participating wholesale customers are paid for each MWh curtailed. If payments are not based on MWhs curtailed, leave blank.

Minimum payment rate (\$/MWh) - Enter the minimum payment rate in dollars per MWh. If no minimum payment rate, enter zero.

Capacity payment rate (\$/kW-month) - For capacity programs only, enter the amount, in dollars per kilowatt-month, that participating customers are paid. If multiple rates are paid, enter the average payment rate for all capacity covered by

INSTRUCTIONS AND INFORMATION SPECIFIC TO SURVEY QUESTIONS

Q9 (continued)

the program. If not a capacity program, leave blank.

Minimum duration of event (hours) - Enter the minimum number of hours an event can last for this program/tariff. If not applicable, leave blank.

Maximum duration of event (hours) - Enter the maximum number of hours an event can last for this program/tariff. If not applicable, leave blank.

Specific event limits (number) - Enter the maximum number of times a program participant can be called on to reduce energy consumption per year. If not applicable, leave blank.

Bid limit (\$/MWh) - Enter the highest bid amount which will be accepted from any program participants (in \$/MWh).

Program start date (MM/YYYY) - Enter the month and year the program/tariff started.

Program end date (MM/YYYY) - Enter the month and year the program/tariff ended, or is scheduled to end, if applicable. If not applicable, leave blank.

Minimum term (years) - Enter the minimum number of years wholesale customers must participate. If none, enter zero.

Are participants in the program excluded from taking part in other demand response programs? - Indicate whether or not participants in the program/tariff you are reporting are prohibited from participating in other demand response programs.

May participants in this program be charged penalties? (Y or N) - Answer "Y" for "yes" if there is a penalty for not meeting the terms of this program/tariff. Answer "N" for "no" if there is no penalty for not meeting the terms of this program/tariff.

To add information about another WHOLESale program/tariff, click on the Add Page button to create a new blank WHOLESale program/tariff page.

To delete the page, click on the Del Page button. Note that the Del Page button will not delete this page if it is the only WHOLESale program/tariff page in the form.

If you have entered all of the programs offered by your entity in each of the NERC Region/state combinations in which it operates, YOU ARE FINISHED WITH THE SURVEY. Please submit it to FERC as specified in HOW TO FILE (above).

GLOSSARY

Note: The terms and definitions provided in this glossary are for the limited purpose of this survey.

Actual MWh Change: The total change in energy consumption (measured in MWh) that resulted from the deployment of demand response programs during the year.

Advanced Meters: Meters that measure and record usage data at hourly intervals or more frequently, and provide usage data to both consumers and energy companies at least once daily. Data are used for billing and other purposes. Advanced meters include basic hourly interval meters, meters with one-way communication, and real-time meters with built-in two-way communication capable of recording and transmitting instantaneous data.

Aggregator: See “**Curtailment Service Provider**”

Ancillary Services: Services that ensure reliability and support the transmission of electricity to customer loads. Such services may include: energy imbalance, operating reserves, contingency reserves, spinning (also known as synchronized, ten-minute spinning, responsive) reserves, supplemental (also known as non-spinning, non-synchronized, ten-minute non-synchronous, thirty-minute operating) reserves, reactive supply and voltage control, and regulation and frequency response (also known as regulation reserves, regulation service, up-regulation and down-regulation).

Bid Limit: The maximum bid, in \$/MWh, that can be submitted by a demand response program participant. If there is no bid limit, leave blank.

Capacity (program type): Displacement or augmentation of generation for planning and/or operating resource adequacy; penalties are assessed for nonperformance.

Capacity Market Programs: Arrangements in which customers offer load reductions as system capacity to replace conventional generation or delivery resources. Participating customers typically receive notice of events requiring a load reduction and face penalties when failing to curtail load. Incentives usually consist of up-front reservation payments.

Capacity Service: A type of demand response service in which **demand resources** are obligated over a defined period of time to be an available resource for the system operator.

Commercial and Industrial: Belonging to either of the energy-consuming sectors that consist of (a) a broad range of facility types including office buildings, retail establishments, hospitals, universities, the facilities of federal, state, and local governments and non-profit organizations, institutional living quarters, master-metered apartment buildings, and homes on military bases; and (b) manufacturing facilities and equipment used for producing, processing, or assembling goods and encompassing the following types of activities: manufacturing; processing; agriculture, forestry and fisheries; mining; and construction. Also, a business labeled as “industrial” by the North American Industry Classification System or by the energy provider on the basis of energy demand or annual usage exceeding some specified limit set by the energy provider.

Coincident Reduction Capability: The amount of demand response curtailments that would be realized if all demand response products were called simultaneously and all responded by curtailing load at prearranged levels or at their enrolled quantity.

Critical Peak Pricing with Load Control: Demand-side management that combines direct load control with a pre-specified high price for use during designated critical peak periods, triggered by system contingencies or high wholesale market prices.

Critical Peak Pricing: Rate and/or price structure designed to encourage reduced consumption during periods of high wholesale market prices or system contingencies by imposing a pre-specified high rate or price for a limited number of days or hours.

Curtailment Service Provider: Businesses that sponsor demand response programs that recruit and contract with end users, and sell the aggregated demand response to utilities, RTOs and ISOs. A Curtailment Service Provider is sometimes called an Aggregator and is not necessarily a load-serving entity.

Customer Sector: A group of customers: **residential, commercial and industrial,** and **other** (for example, **transportation, agricultural**).

Demand Bidding & Buy-Back: A program which allows a demand resource in retail and wholesale markets to offer load reductions at a price, or to identify how much load it is willing to curtail at a specific price.

Demand Resource or Demand-Side Resource: An electricity consumer that can decrease its power consumption in response to a price signal or direction from a system operator.

Demand Response: Changes in electric use by demand-side resources from their normal consumption patterns in response to changes in the price of electricity, or to incentive payments designed to induce lower electricity use at times of high wholesale market prices or when system reliability is jeopardized.

Demand Response Program: A company's service/program/tariff related to demand response, or the change in customer electric usage from normal consumption patterns in response to changes in the price of electricity over time or in response to incentive payments designed to induce lower electricity use at times of high wholesale market prices, or a change in electric usage by end-use customers at the direction of a system operator or an automated preprogrammed control system when system reliability is jeopardized. Includes both time-based rate programs and incentive-based programs.

Demand Response Program/Tariff and Program/Tariff Types: A company or utility's service/product/compilation of all effective rate schedules, general terms and conditions and standard forms related to demand response and/or AMI services and classification thereof.

Direct Load Control: A demand response activity by which the program sponsor remotely shuts down or cycles a customer's electrical equipment (e.g. air conditioner, water heater) on short notice. Direct load control programs are primarily offered to residential or small commercial customers. Also known as direct control load management.

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Display Unit/In-home Display: Customer on-site device that receives (from a service provider or from a smart meter) and displays for the customer information such as usage and pricing data, messages, and alerts.

Duration of Event: The length of an Emergency or Economic Demand Response Event, in hours.

Economic Demand Response Event: An event in which the demand response program sponsor directs response to an economic market opportunity, rather than for reliability or because of an emergency in the energy delivery system.

Electric Utility: A corporation, person, agency, authority, or other legal entity or instrumentality producing, transmitting, or distributing electricity for use primarily by the public. This includes: investor-owned electric utilities, municipal and state utilities, federal electric utilities, and rural electric cooperatives. A few entities that are tariff based and affiliated with companies owning distribution facilities are also included in this definition.

Emergency Event: An abnormal system condition (for example, system constraints and local capacity constraints) that requires automatic or immediate manual action to prevent or limit the failure of transmission facilities or generation supply that could adversely affect the reliability of the Bulk Electric System.

Emergency Demand Response Event: The period of time during which participants in a Demand Response Program must reduce load. The Emergency Demand Response Event is announced by the program sponsor in response to an Emergency Event declared by it or by another entity such as a utility or RTO/ISO. Demand Response Program sponsors, utilities and RTO/ISOs typically declare these emergency events.

Emergency Demand Response Program: A demand response program that provides incentive payments to customers for load reductions achieved during an Emergency Demand Response Event.

End-Use Customer: A firm or individual that purchases electricity for its own consumption and not for resale; an ultimate consumer of electricity.

Energy Payment for MWh Curtailed (\$/MWh): Compensation paid or received for reductions in electric energy consumption.

Energy Service Providers: See **Power Marketers**.

Entity: The organization that is (1) responding to the survey, (2) offering demand response programs, time-based rates and/or tariffs, or (3) using advanced or smart meters.

Entity ID Number: The respondent should enter the ID number which appears on the survey transmittal e-mail, or the ID number used for the entity's response to Form EIA-861.

Event Limits: The maximum number of times a demand response resource may be called during a specified period of time (typically one year or one season).

Federal Electric Utility: A utility that is either owned or financed by the Federal Government.

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Generation and Transmission Company (G&T Company): A company that provides both energy production and facilities for transmitting energy to wholesale customers. G&T companies are usually formed by rural electric cooperatives and electric utilities to pool the costs and risks of constructing and managing the generation facilities and high-voltage transmission infrastructure which are needed to deliver energy to their customers.

Hourly Pricing: A pricing plan in which energy prices vary by the hour, usually based in part on a wholesale market price for energy.

In-home Display: See [Display Unit/In-home Display](#).

Industrial Sector: The energy-consuming sector that consists of manufacturing facilities and equipment used for producing, processing, or assembling goods. The Industrial Sector encompasses the following types of activities: manufacturing; processing; agriculture, forestry and fisheries; mining; and construction. The term Industrial Sector may also designate a business labeled as “industrial” by the North American Industry Classification System or by the energy provider on the basis of energy demand or annual usage exceeding some specified limit set by the energy provider. See [Commercial and Industrial](#) sector.

Internet: The worldwide, publicly accessible series of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol.

Interruptible Load: Electric consumption subject to curtailment or interruption under tariffs or contracts that provide a rate discount or bill credit for agreeing to reduce load during system contingencies. In some instances, the demand reduction may be effected by action of the System Operator (remote tripping) after notice to the customer in accordance with contractual provisions.

Interval: The period of time for which advanced meters measure energy usage (and possibly other data). Increments are typically in minutes, and may consist of five-minute intervals, 15-minute intervals, or hourly intervals.

Interval Meter: An electric meter that measures energy use in increments of one hour or less.

Interval Usage: The amount of energy, measured in kWh, consumed during a period of time, typically five minutes, 15 minutes, or an hour.

Investor-Owned Electric Utility: A privately-owned electric utility whose stock is publicly traded. It is rate regulated and authorized to achieve an allowed rate of return.

Joint Action Agency: A body consisting of utility companies, municipalities who own public utilities, and/or municipalities who purchase energy from private utilities, which acts as a committee for making decisions regarding the acquisition and delivery of energy resources or related services.

Load as a Capacity Resource: Demand-side resources that commit to make pre-specified load reductions when system contingencies arise.

Load Serving Entity: Entities that provide electric service to end-users, wholesale customers,

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or both.

Mandatory Participation: Participation in the demand response program is required based on the customer's size or rate class. Customers are not offered the option of refusing to respond to requests for load reduction.

Maximum Demand: The highest level of demand in MWs as tracked by an entity, such as an hourly demand, 30-minute demand, 15-minute demand or 5-minute demand.

Maximum Demand of Customers: The highest level of total demand, in MWs, for customers participating in a demand response program, excluding any demand reduction that results from the program. The maximum non-coincident demand of the participating customers that would occur without the program.

Maximum Duration of Event: A specified maximum length of time a particular demand response event will continue, usually defined by 30-minute or hourly increments.

Megawatt (MW): One thousand kilowatts or one million watts of electric power.

Megawatt-hour (MWh): One thousand kilowatt-hours or one million watt-hours of electric energy.

Member Company: Member of a joint action agency or generation and transmission company that supplies wholesale electricity and energy services.

Minimum Payment Rate: The smallest amount of money, in dollars per megawatt-hour, that a program sponsor will pay a demand response program participant for reduced energy consumption.

Minimum Reduction: A level established by the demand response program sponsor as the least amount of demand reduction, in megawatts, a participant must achieve during a demand response event to be considered as participating in that event or to qualify for the demand response program.

Minimum Term: The shortest period of time that customers are obligated to participate in a demand response program.

Municipality: A village, town, city, county, or other political subdivision of a state.

NERC Regional Entity: One of the eight groups listed below (formerly known as Reliability Councils) organized within the major interconnections in the North American bulk power system. They work with the North American Electric Reliability Corporation to improve the reliability of the bulk power system. Florida Reliability Coordinating Council (FRCC), Midwest Reliability Organization (MRO), Northeast Power Coordinating Council (NPCC), ReliabilityFirst Corporation (RFC), SERC Reliability Corporation (SERC), Southwest Power Pool RE (SPP), Texas Regional Entity (TRE), Western Electricity Coordinating Council (WECC). The states of Alaska and Hawaii are not within a NERC Regional Entity, but for purposes of this survey appear as a choice in NERC Regional Entity fields.

Non-Spinning Reserves: Demand-side resource that may not be immediately available, but

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may provide solutions for energy supply and demand imbalance after a delay of ten minutes or more.

Opt-In: A Time-Based Rate/Tariff or demand response program in which a customer will be enrolled only if the customer chooses to enroll.

Opt-Out: A Time-Based Rate/Tariff or demand response program in which a customer will be enrolled unless the customer chooses not to enroll; a program that is the default for a class of customers but that allows individual customers to choose an alternative rate/tariff or program.

Other (as shown in Q3, Q5 & Q6): Customers who are in a customer class that is not listed.

Other Demand Response Program/Tariff: A company or utility's service/product/compilation of all effective rate schedules, general terms and conditions and standard forms related to demand response/AMI services for customers that are not **Residential, Commercial and Industrial**, or **Other**.

Peak Time Rebate: Peak time rebates allow customers to earn a rebate by reducing energy use from a baseline during a specified number of hours on critical peak days. Like Critical Peak Pricing, the number of critical peak days is usually capped for a calendar year and is linked to conditions such as system reliability concerns or very high supply prices.

Penalties: Fines or reductions in payments that result when a demand response program participant fails to meet targeted reductions in power demand or chooses to not reduce consumption during a demand response event.

Potential Peak Reduction: The sum of the load reduction capabilities (measured in megawatts) of the demand response program participants, within the specified customer sector, whether reductions are made through the direct control of the utility system operator or by the participant in response to price signals or a utility request to curtail load. It reflects the demand reduction capability, as opposed to the actual peak reduction achieved by participants.

Power Marketers: Business entities, including energy service providers, which are engaged in buying and selling electricity, but which do not necessarily own generating or transmission facilities. Power marketers and energy service providers take ownership (title) of the electricity, unlike power brokers, who do not take title to electricity. Power marketers are involved in interstate commerce and must file with the FERC for authority to make wholesale sales. Energy service providers will not file with FERC but may file with the states if they undertake only retail transactions.

Program Type: The category of demand response arrangements between retail or wholesale entities and their retail or wholesale customers. Examples of these arrangements include: critical peak pricing, critical peak pricing with load control, direct load control, interruptible load, load as a capacity resource, regulation, non-spinning reserves, spinning reserves, demand bidding and buy-back, time of use pricing, real-time pricing, system peak response transmission tariff, peak time rebate, and emergency demand response, all of which are defined in this glossary.

Program End Date: A date specified when the demand response and/or time-based rate program is no longer in effect.

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Program Start Date: A date specified when a demand response and/or time-based rate program began.

Public Utility District: Municipal corporations organized to provide electric service to both incorporated cities and towns and unincorporated rural areas.

Publicly Owned Electric Utility: Utilities operated by municipalities, political subdivisions, and state and federal power agencies (such as the Bonneville Power Administration and the Tennessee Valley Authority).

Realized Demand Reduction: The largest hourly demand reduction (in megawatts) that occurred when the demand response program was called, or that was attributable to the demand response program, during the ~~2011~~2009 calendar year.

Real Time Meters: Meters that measure energy as used, with built-in two-way communication capable of recording and transmitting instantaneous data.

Real Time Pricing: Rate and price structure in which the retail price for electricity typically fluctuates hourly or more often, to reflect changes in the wholesale price of electricity on either a day-ahead or hour-ahead basis.

Regulation Service: A type of Demand Response service in which a Demand Resource increases and decreases load in response to real-time signals from the system operator. Demand Resources providing Regulation Service are subject to dispatch continuously during a commitment period. This service is usually responsive to Automatic Generation Control (AGC) to provide normal regulating margin. Also known as regulation or regulating reserves, up-regulation and down-regulation.

Reliability: A measure of the ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system components.

Reliability Event: An event, such as the loss of a line or generator, or imbalance between supply and demand, which threatens the safe operation of the grid.

Reserve: A service in which demand resources are obligated to be available to provide demand reduction upon deployment by the system operator, based on reserve capacity requirements that are established to meet reliability standards.

Residential: The energy-consuming sector consisting of private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other electric-powered devices. The residential sector excludes institutional living quarters. This sector excludes deliveries or sales to master-metered apartment buildings or homes on military bases (these buildings or homes are included in the commercial sector).

Response Time: The maximum time allowed in a demand response program for a program participant to react to the program sponsor's notification, in hours.

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Retail: Sales covering electrical energy supplied for residential, commercial, industrial, and other (e.g., agricultural) end-use purposes. Electricity supplied at retail cannot be offered for resale.

Retail Customer: A purchaser of energy that consumes electricity for residential, commercial, or industrial use, or a variety of other end-uses.

Retail Electric Customer: See Retail Customer.

Rural Electric Cooperative: A member-owned electric utility company serving retail electricity customers. Electric cooperatives may be engaged in the generation, wholesale purchasing, transmission, and/or distribution of electric power to serve the demands of their members on a not-for-profit basis.

Specific Event Limits: The maximum number of times that a participant in a demand response program may be called to reduce energy consumption during a year.

Spinning/Responsive Reserves: Demand-side resource that is synchronized and ready to provide solutions for energy supply and demand imbalance within the first few minutes of an Emergency Event.

System Peak Response Transmission Tariff: The terms, conditions, and rates and/or prices for customers with interval meters who reduce load during peaks as a way of reducing transmission charges.

Tariff: A published volume of all effective rate schedules, terms and conditions under which a product or service will be supplied to customers.

Time-Based Rate/Tariff: A retail rate or Tariff in which customers are charged different prices for using electricity at different times during the day. Examples are time-of-use rates, real time pricing, hourly pricing, and critical peak pricing. Time-based rates do not include seasonal rates, inverted block, or declining block rates.

Time-of-Use: A rate where usage unit prices vary by time period, and where the time periods are typically longer than one hour within a 24-hour day. Time-of-use rates reflect the average cost of generating and delivering power during those time periods.

Transportation: An energy consuming sector that consists of electricity supplied and services rendered to railroads and inter-urban and street railways, for general railroad use including the propulsion of cars or locomotives, where such electricity is supplied under separate and distinct rate schedules. In this survey, transportation customers should be counted in the **Other** category.

Transportation Program/Tariff: A company or utility's service/product/compilation of all effective rate schedules, general terms and conditions and standard forms related to demand response/AMI services for transportation customers.

Type of Entity: The category of organization that best represents the energy market participant. The available options include: investor-owned utility, municipal utility, cooperative utility, state-owned utility, federally-owned utility, independent system operator, retail power

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marketer, wholesale power marketer, regional transmission operator, curtailment service provider, transmission, or other.

Voluntary: Customers have the option of participating or not participating. This would include opt-out programs where customers are automatically enrolled but are allowed to discontinue their participation.

Wholesale: Pertaining to a sale of electric energy for resale.

Wholesale Customer: An entity that purchases electric energy for resale.

Descriptions of Demand Response and Time-Based Rate Program Types (These program types appear in the FERC-731 drop-down menus)	
Program Types	Description
Direct Load Control	Program sponsor remotely shuts down or cycles a customer’s equipment (e.g. air conditioner, water heater) on short notice. Primarily offered to residential or small commercial customers. Also called “direct control load management.”
Interruptible Load	Load subject to curtailment or interruption under tariffs or contracts that provide a rate discount or bill credit for agreeing to reduce load during system contingencies. In some programs, the System Operator makes the demand reduction (remote tripping) after notice to the customer per contractual provisions.
Critical Peak Pricing with Load Control	Demand-side management that combines direct load control with a pre-specified high price for use during designated critical peak periods, triggered by system contingencies or high wholesale market prices.
Load as a Capacity Resource	Demand-side resources that commit to make pre-specified load reductions when system contingencies arise.
Spinning Reserves	Demand-side resource that is synchronized and ready to provide solutions for energy supply and demand imbalance within the first few minutes of an Emergency Event.
Non-spinning Reserves	Demand-side resource that is capable of providing solutions for energy supply and demand imbalance after a delay of ten minutes or more.
Emergency Demand Response	A demand response program that provides incentive payments to customers for load reductions during an Emergency Demand Response Event.
Regulation	A Demand Response service in which a Demand Resource increases and decreases load in response to real-time signals from the system operator, and is subject to dispatch continuously during a commitment period. This service is usually responsive to Automatic Generation Control (AGC). Also known as regulation or regulating reserves, up-regulation and down-regulation.
Demand Bidding & Buy-Back	A program which allows a demand resource in retail and wholesale markets to offer load reductions at a price, or to identify how much load it is willing to curtail at a specific price.
Time-of-Use	A rate where usage unit prices vary by time period, and where the time periods are typically longer than one hour within a 24-hour day. Time-of-use rates reflect the average cost of generating and delivering power during those time periods. The rates are known ahead of time
Critical Peak Pricing	Rate or price structure designed to encourage reduced consumption during periods of high wholesale market prices or system contingencies by imposing a pre-specified high rate or price for a limited number of days or hours.
Real-Time Pricing	Rate or price structure in which the retail price for electricity typically fluctuates hourly or more often, to reflect changes in the wholesale price of electricity on either a day-ahead or hour-ahead basis.
Peak Time Rebate	A rebate to customers that reduce energy use from a baseline during a specified number of hours on critical peak days. Like Critical Peak Pricing, the number of critical peak days is usually capped for a calendar year and is linked to conditions such as system reliability concerns or very high supply prices.
System Peak Response	The terms, conditions, and rates or prices for customers with interval

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Transmission Tariff	meters who reduce load during peaks as a way of reducing transmission charges.
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