

# CITY OF SENECA

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MAYOR JOE MITCHELL  
531 Main Street, PO Box 40  
Seneca, Kansas 66538  
(785)336-2747 office  
(785)336-6344 fax

January 20, 2012

Attn: David Neumayer, Power Marketing Manager  
Western Area Power Administration  
Rocky Mountain Region  
PO Box 3700  
5555 East Crossroads Blvd  
Loveland CO 80539-3003

Dear Mr. Neumayer:

Enclosed please find the 5-Year Integrated Resource Plan (IRP) for the City of Seneca. Bound with the plan is a copy of Resolution No. 01182012 which was passed by the governing body to formally adopt the plan.

Thank you for being flexible in allowing an extension of the submission deadline. The city sincerely appreciates it.

If you have questions or require additional information, please contact me by telephone at 785/336-2747 or by email at [senecaks@gmail.com](mailto:senecaks@gmail.com).

Sincerely,



Tami K. Haverkamp  
City Administrator

# INTEGRATED RESOURCE PLAN (IRP) 5-Year Plan

<b>Customer Name:</b>
<b>City of Seneca, Kansas</b>

<b>IRP History:</b> Check one as applicable.	
<input checked="" type="checkbox"/>	<b>This is the submitter's first IRP submittal.</b>
<input type="checkbox"/>	<b>This submittal is an update/revision to a previously submitted IRP.</b>

<b>Reporting Dates:</b>	
<b>IRP Due Date:</b>	June 1, 2011 (Dec. 31, 2011 per ext)
<b>Annual Progress Report Due Date:</b>	October 1, 2012

<b>Customer Contact Information:</b> Provide contact information for your organization. The contact person should be able to answer questions concerning the IRP.	
<b>Customer Name:</b>	City of Seneca, Kansas
<b>Address:</b>	531 Main
<b>City, State, Zip:</b>	Seneca, Kansas, 66538
<b>Contact Person:</b>	Tami Haverkamp
<b>Title:</b>	City Administrator
<b>Phone Number:</b>	785-336-2747
<b>E-Mail Address:</b>	<a href="mailto:senecaks@gmail.com">senecaks@gmail.com</a>
<b>Website:</b>	<a href="http://www.seneca-kansas.us">www.seneca-kansas.us</a>

<b>Type of Customer:</b> Check one as applicable.	
<input checked="" type="checkbox"/>	<b>Municipal Utility</b>
<input type="checkbox"/>	<b>Electric Cooperative</b>
<input type="checkbox"/>	<b>Federal Entity</b>
<input type="checkbox"/>	<b>State Entity</b>
<input type="checkbox"/>	<b>Tribal</b>
<input type="checkbox"/>	<b>Irrigation District</b>
<input type="checkbox"/>	<b>Water District</b>
<input type="checkbox"/>	<b>Other (Specify):</b>

**SECTION 1****UTILITY/CUSTOMER OVERVIEW****Customer Profile:**

Enter the following data for the most recently completed annual reporting period. Data may be available on form EIA-861, which you submit to the U.S. Energy Information Administration (EIA).

<b>Reporting Period</b>	
Reporting Period Start Date (mm/dd/yyyy)	01/01/2010
Reporting Period End Date (mm/dd/yyyy)	12/31/2010
<b>Energy Sales &amp; Usage</b>	
Energy sales to Ultimate End Customers (MWh)	33885
Energy sales for Resale (MWh)	0
Energy Furnished Without Charge (MWh)	480
Energy Consumed by Respondent Without Charge (MWh)	602
Total Energy Losses (MWh entered as positive number)	580
Total Energy Usage (sum of previous 5 lines in MWh)	35547
<b>Peak Demand (Reporting Period)</b>	
Highest Hourly Summer (Jun. – Sept.) Peak Demand (MW)	9.4
Highest Hourly Winter (Dec. – Mar.) Peak Demand (MW)	6.3
Date of Highest Hourly Peak Demand (mm/dd/yyyy)	08/10/2010
Hour of Highest Hourly Peak Demand (hh AM/PM)	15:00 PM
<b>Peak Demand (Historical)</b>	
All-Time Highest Hourly System Peak Demand (MW)	9.4
Date of All-Time Hourly System Peak Demand (mm/dd/yyyy)	08/10/2010
Hour of All-Time Hourly Peak System Demand (hh AM/PM)	15:00 PM
<b>Number of Customers/Meters (Year End of Reporting Period)</b>	
Number of Residential Customers	967
Number of Commercial Customers	203
Number of Industrial Customers	56
Other (Specify): <b>Church and school</b>	15
Other (Specify):	

**Customer Service Overview:**

Describe your customer service territory and the services provided. Include geographic area, customer mix, key customer and significant loads, peak demand drivers, competitive situation, and other significant or unique aspects of the customer and/or service territory. Provide a brief summary of the key trends & challenges impacting future resource needs including population changes, customer growth/losses, and industrial developments.

Seneca is located in the far northeast corner of Kansas in Nemaha County. There is a balance of 78% residential customers and 22% commercial and industrial customers. The largest industrial customer is Koch & Co. wood and cabinet manufacturing facility, which amounts to about 10% of the city's total sales. Their other large user is J-Six, an agricultural processing plant, which purchases over 5% of total retail sales. A good portion of Seneca's customer mix is agricultural based including customers such as Helena, Nemaha County Coop, and Sure Crop. A new agricultural company, Ag Synergy Corp., recently announced they are expanding in Seneca.

Seneca has plenty of development sites and aggressively seeks growth in the community. Health Care and assisted living sectors are showing great potential in the Seneca area in the coming years.

The city serves electricity, water and sewer services to the community. Natural gas, refuse removal, and cable service are provided through independent providers of which Seneca receives a franchise fee.

The population in Seneca has been fairly stable over the past several years with limited changes in our residential customer counts or commercial and industrial customer base. The community has seen most of its growth from increases in their large customers who have had production increase despite the slower economy. They have also had improvements in their metering to capture load they previously were not.

The community has had issues with having enough affordable housing for lower level manufacturing employees.

### Electricity Utility Staff & Resources:

Summarize the number of full-time equivalent employees by primary functions such as power production, distribution, and administration. Describe any resource planning limitations, including economic, managerial, and/or resource capabilities.

#### Electric Distribution Department (3 full-time employees)

- 1- City Electrician: Primary oversight of electrical operations and line work
- 2- Lineman: Assisting in maintenance duties

#### City Hall (3 full-time employees)

- 1- City Administrator: Management over all city departments
- 1- City Clerk: Management of documents of city government
- 1- Assistant City Clerk: Directly over utility billing and other duties

The City has limited staff time that they can allocate towards management of their electric department. The administrative staff is assigned to duties outside of the electric department so the development, administration and tracking of any energy related programs is difficult due to these time constraints.

### Historical Energy Use:

Enter the peak system demand and total annual energy use for the preceding ten (10) reporting years. For total energy, include retail sales, energy consumed or provided without charge, and system losses.

Reporting Year	Peak Demand (MW)	Total Energy (MWh)
2001	6190	23664
2002	6393	24197
2003	6103	24743
2004	5710	25415
2005	6379	27819
2006	7191	28821
2007	6251	31914
2008	8016	32235
2009	8047	30538
2010	9442	35547

**SECTION 2****FUTURE ENERGY SERVICES PROJECTIONS****Load Forecast:**

Provide a load forecast summary for the next ten (10) years; **and** provide a narrative statement describing how the load forecast was developed. Discuss any expected future growth. If applicable, you may attach a load forecast study and briefly summarize the results in this section. (See 10 CFR § 905.11 (b) (5)).

Load Forecast:

Reporting Year	Peak Demand (MW)	Total Energy (MWh)
2011	9,584	36,080
2012	9,727	36,621
2013	9,873	37,171
2014	10,021	37,728
2015	10,172	38,294
2016	10,324	38,869
2017	10,479	39,452
2018	10,636	40,043
2019	10,796	40,644
2020	10,958	41,254

Narrative Statement:

The past 10 years the city has seen an average of 5% per year growth. There has been a couple of circumstances where it was more or less but for the most part, fairly consistent. With the economy slowing down, a 1.5% growth was used to forecast growth over the next 10 years.

The city knows of a new customer locating in city limits within the next 12 months but is mostly labor and not energy intensive except from ancillary growth from the new job creation. The growth projections in the above chart reflects normal regional growth and not the anticipation of any specific industry locating here.

## SECTION 3

## EXISTING SUPPLY-SIDE RESOURCES

### **Existing Supply-Side Resource Summary:**

Provide a general summary of your existing supply-side resources including conventional resources, renewable generation, and purchase power contracts (including Western Area Power Administration contracts). Describe the general operation of these resources and any issues, challenges, or expected changes to these resources in the next five (5) years. (See 10 CFR § 905.11 (b) (1)).

The City of Seneca is, currently, a member of the Kansas Power Pool (KPP). Currently, there are 34 members taking service from the KPP. This power pool provides the city with all of its power requirements including transmission and ancillary services. The exception is the 652 kW allocation of Western Area Power Administration (WAPA) resource that is directly delivered to the city.

The KPP has a number of different resources they can lean on to help them meet the requirements of their member cities. They determine what their cost will be over the next year and develop a rate to charge each member. The rate they charge is the same for all members. Seneca is on the operating board and helps to determine what that rate will be.

The charge to the city is broken out between capacity, administrative, transmission, energy charge adjustment, and energy charge. These charges are applied to all the power Seneca takes minus the amount delivered to the city through the WAPA contract.

The City has recently provided notice to the KPP of their intent to terminate membership in this pool. There is a 2 year notice period so beginning in January 2014, the city will no longer be in this power pool. Currently, the city expects to join a different type of power pool administered by the Kansas Municipal Energy Agency (KMEA) and referred to as EMP3 power pool. The city will continue receiving their WAPA allocation directly but then layer in other resources as obtained. The City will purchase the remainder of their energy requirements through a Westar load following agreement.

**Existing Generation Resources:**

List your current supply-side resources, including conventional resources and renewable generation. If you do not own any generating resources, insert N/A in the first row. Insert additional rows as needed.

<b>Resource Description</b> (Identify resources as base load, intermediate, or peaking)	<b>Fuel Source</b>	<b>Rated Capacity (MW)</b>	<b>In-Service Date (Year)</b>	<b>Estimated Expiration/Retirement Date (Year)</b>
N/A	N/A	N/A	N/A	N/A

**Existing Purchase Power Resources:**

List your current purchase power resources. Define whether the contract provides firm service, non-firm service, all requirements or another type of service. Include Western Area Power Administration resources. If applicable, include a summary of resources that are under a net metering program. Insert additional rows as needed.

<b>Resource Description</b>	<b>Fuel Source</b> (If applicable)	<b>Contracted Demand (MW)</b>	<b>Type of Service</b> (Firm, Non-firm, Requirements, Other)	<b>Expiration Date (Year)</b>
Western Area Power Adm		.652/.577	Firm	2024
Kansas Power Pool		Load Following	Firm	2014

**SECTION 4****EXISTING DEMAND-SIDE RESOURCES**

Demand-side programs alter a customer's use pattern and include energy conservation, energy efficiency, load control/management, education, and distribution system upgrades that result in an improved combination of energy services to the customer and the ultimate consumer.

**Existing Demand-Side Resources:**

List your current demand-side programs, including energy conservation, energy efficiency, load control/management, education, or maintenance plans, or system upgrades. Programs may impact the utility distribution system, municipally owned facilities, and/or end-user energy consumption. Refer to Section 9 of this form for a list of example programs. Insert additional rows as needed.

(See 10 CFR § 905.11 (b) (1)).

<b>Program Description</b>	<b>Estimated Program Savings (MW and/or MWh if known)</b> (Include annual impact and impact over the life of the program if known.)
The city implemented a voluntary load management program in 1985 that allows the city to shed air-conditioner compressors during high demand periods automatically. Currently, over 700 customers have devices on their A/C units	The city cycles the installed units over 4 zones so during one hour, the city can shed approximately .75 mW off the peak demand
The city converted their streetlights to high pressure sodium fixtures saving over 100 watts per fixture	73 mWhs per year savings
Recently, the city developed and began offering an off-peak rate that gives an incentive for customers to increase usage during off-peak hours and decrease usage on-peak.	Currently 1 customer on rate but expect 2 to 3 additional customers may consider it. Estimated savings off peak demand is .400 mWs
The city has offered rebates to customers who install energy efficient equipment and lighting through the KPP	
Participation in the Efficiency Kansas program offering energy audits and zero percent loans for equipment upgrades	City has had minimal participation in program to date. Two customers have participated in some level.
Performed maintenance on system reclosures and did preventative Infrared scanning on transformers Replaced over 200 distribution poles	
Metering Improvements and change from Mechanical to solid state	
Perform regular line clearance and tree trimming to reduce stray current from line contact	

## SECTION 5

# FUTURE RESOURCE REQUIREMENTS AND RESOURCE OPTIONS

### **Balance of Loads and Resources (Future Resource Requirements):**

Provide a narrative statement that summarizes the new resources required to provide retail consumers with adequate and reliable electric service during the 5-year resource planning period. Identify any federal or state regulations that may impact your future resource requirements. If you are not experiencing or anticipating load growth and a need for new resources, describe your current procedure to periodically evaluate the possible future need for new resources.

Over the next two years, Seneca is not expecting to change its resources due to its existing membership with the KPP. However, as it moves to a "project based" pool they anticipate obtaining (via purchases contractually and not physical installation) additional resources to meet the retail customers demands. The city is currently seeking to obtain approximately 2 mW of base resource and approximately 3 mW of peaking capacity. Both of these resources would be targeted for January 2014 to begin when the city moves into the new power pool.

The city search for peaking capacity is being impacted by The National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines Rules that states that all emissions of toxic air pollutants from existing diesel powered stationary reciprocating internal combustion engines (NESHAP RICE) must be reduced. It will control emissions of formaldehyde, acetaldehyde, acrolein, methanol and other air toxics from diesel engines. This may impact the availability of peaking units to purchase.

**Identification of Resource Options**

Identification and comparison of resource options is an assessment and comparison of existing and future supply-side and demand-side resources available to a customer based upon size, type, resource needs, geographic area, and competitive situation. Resource options evaluated must be identified. The options evaluated should related to the resource situation unique to each Western customer as determined by profile data such as service area, geographical characteristics, customer mix, historical loads, projected growth, existing system data, rates, financial information, and load forecast. (See 10 CFR § 905.11 (b) (1)).

Considerations that may be used to develop potential resource options include cost, market potential, consumer preferences, environmental impacts, demand or energy impacts, implementation issues, revenue impacts, and commercial availability.

(See 10 CFR § 905.11 (b) (1) (iii)).

**Future Supply-side Options:**

List the future supply-side resource options that were considered and evaluated, including, but not limited to conventional generation, renewable generation, and power purchase contracts. Include a brief discussion on the applicability of each option for further consideration or implementation based on your system requirements and capabilities. If new resources are not required during the 5-year resource planning period, please indicate that below. Insert additional rows as needed.

(See 10 CFR § 905.11 (b) (1)).

Supply-Side Option	Applicability for Implementation or Further Consideration
KPP – 20 year membership	The city reviewed staying in the KPP and extending their membership to 20 years. This would involve the city relying on the pool, and its staff, to make all arrangements and decisions on future power supplies
KPP – 2 year membership	An option considered was to continue in the KPP under its existing 2 year membership arrangement. Currently there are 12 cities that have this sort of membership. The Board decided to increase the rate that the cities who do not increase membership to 20 years by 2.85%. Several members elected to terminate membership therefore cost will be increasing to remaining cities. Seneca is terminating membership in December 2013.
Westar Full-Requirements Contract	The investor owned utility who previously served Seneca offers a 10, 15, or 20 year cost based full requirement contract that Seneca has researched either directly or through the area electric cooperative.
Westar Partial requirement UML contract	Seneca researched taking service directly from Westar under the UML but without generation to cover its peak hours it wasn't available
KMEA EMP3 Project	Seneca researched and accepted the offer from KMEA to participate with other cities to form a "collaborative" pool and manage their own resources by securing supplies independently, and then utilize KMEA to secure a load following resource(UML). Renewable hydro was researched from the Bowersock project that could be obtained under this option but was unable to purchase due to sellers restrictions

**Future Demand-side Options:**

List the future demand-side resource options that were considered and evaluated. Demand-side programs alter a customer's use pattern and include energy conservation, energy efficiency, load control/management, education, and distribution system upgrades that result in an improved combination of energy services to the customer and the ultimate consumer. Include a brief discussion on the applicability of each option for further consideration or implementation based on your system requirements and capabilities. Insert additional rows as needed. (See 10 CFR § 905.11 (b) (2)).

Demand-Side Option	Applicability for Implementation or Further Consideration
Expand residential load management program	The community has had good participation in this program over the years with little or no communication or promotion. The city could invest some time and effort into expanding the program in the future.
Off-peak rates	The city just implemented a rate ordinance that encourages consumers to take service off-peak verses during time that the city demand is highest. Currently, there is a limit on the size and amount of load that can be served under this program while it is "tested". However, if feasible, the city can expand it and promote it.
Key account management	Work with large consumers to move production off-peak and help them to better manage usage. There is potential to work with these few customers to help them manage their usage and therefore help the city manage as well.
Residential Audit program	Offer and promote residential audit program to help consumers use energy more efficiently. City owns audit equipment so need to train staff to conduct audits and make improvement recommendations
Establish a City Energy Task Force	Identify areas within the city's own facilities where energy can be conserved and establish timelines to make improvements This is an area the City has not focused on but can easily put in place
Continuation of existing efforts	The efforts underway from Section 4 will be continued in the future.

### **Resource Options Chosen:**

Describe the resource options that were chosen for implementation or further consideration and clearly demonstrate that decisions were based on a reasonable analysis of the options. Resource decisions may strike a balance among applicable evaluation factors such as cost, market potential, customer preferences, environmental impacts, demand or energy impacts, implementation issues or constraints, revenue impacts, and commercial availability. (See 10 CFR § 905.11 (b) (1) (iv)).

The city of Seneca is currently a member of the Kansas Power Pool (KPP), and has been taking the majority of their electric requirements from this organization since summer of 2008. The primary driver for the city to join this power pool was because they were offering a power supply with a 2 year obligation while the other options we were considering had considerably longer terms. While the summer of 2008 was not a great year in terms of price we had to pay (due to a number of reasons including record high gas prices and a rush in pool growth), overall, the membership in the pool has been satisfactory.

Recently, the KPP has had opportunities to participate in a couple of projects that are beneficial to some members, but not necessarily to Seneca's. One is the recent requirement they are facing to upgrade their peaking capacity, owned and operated, by other member cities to meet new environmental regulations. They originally wanted to finance the upgrades and then have all members agree to extend agreements to 10 years to pay for them as a group. Everyone would pay the same amount for the upgrades so unless you had a power plant, the funds collected through the increased rates go to other cities. The City of Seneca, along with other cities that do not own generation resisted this effort and it was changed so members DID NOT have to extend their agreements, rather just pay for the upgrades as long as you remain a member. Currently this is on hold but the recommendation is for this to be handled in this manner.

The next issue was the decision to purchase a 40 mW share in the combined cycle Dogwood generating station in Missouri. In order to do this, the pool requested all members to redo their membership agreements and drop their 2 year cancel options and change them to a 20 to 40 year minimum term. Keeping in mind that Seneca joined the KPP because it only required a 2 year exit notice, this wasn't appealing. In addition, the city hasn't wanted to assume the risk for their share of this plant.

In September, they polled all members and asked for them to commit whether they would do the 20 year contract or not. 22 members did agree to this change, while 12 members declined and retained their 2 year status. Since that time, 8 of those 12 have given their notice of intent to terminate their membership. Beginning in 2014, when these cities are gone, the fixed cost currently being paid by these members will be spread over the remaining members.

The City evaluated this situation to see if they should stay in the KPP or submit the 2 year notice and secure an alternate supply arrangement. The pros and cons of staying in the KPP as a 2 year member:

#### **Pros:**

- No involvement is required.
- All decisions can be made by others within pool if so desired.

- City can participate on either Executive Board or as an active participant on the Board of Directors and have input through that as well as various committees
- Not be obligated for long-term as long as careful how votes are done on various projects.
- Minimal long-term risk if vigilant on issues and as long as there are other 2 year cities remaining

**Cons:**

- Cost are uncertain for short-term members
- Uncertain on how many cities are 2 year members and may have limited representation on boards and committees
- Pay for others generation that isn't used by Seneca
- Continuous effort to extend agreements
- Cost have increased

Summary of the other options other than the KPP looking at are :

- Leaving the KPP and join the Kansas Municipal Energy Agency (KMEA) pool they are calling the EMP3
- Leaving the KPP and taking service as a standalone city again from either Westar or others like regional Coop.
- Leaving the KPP and join a Westar administered pool

The following chart is a summary of ESTIMATED PROJECTIONS of cost under a modeled forecast.

SUMMARY							Difference off	
	WAPA	Supplier	D&T	Capacity Pur	Total	\$/kWh	Low cost option	
WESTAR POOL	\$ 90,987.00	\$ 1,412,570.00	\$ 332,913.36	\$ 107,069.00	\$ 1,943,539.36	\$ 0.0538		Being Developed
EMP3	\$ 85,502.41	\$ 1,666,115.38	\$ 332,913.36	\$ 77,022.35	\$ 2,161,553.50	\$ 0.0598	\$ (20,299.76)	Modeled
KPP	\$ 85,909.66	\$ 2,072,330.23	\$ 23,613.36		\$ 2,181,853.26	\$ 0.0580	\$ -	Current
EMP3 10% diversity	\$ 85,502.41	\$ 1,706,210.25	\$ 332,913.36	\$ 63,583.15	\$ 2,188,209.18	\$ 0.0606	\$ 6,355.93	Modeled with 10%
KMEA EMP3	\$ 94,857.00	\$ 1,646,358.00	\$ 332,913.36	\$ 160,050.00	\$ 2,234,178.36	\$ 0.0618	\$ 52,325.10	KMEA version
KPP 2012	\$ 85,909.66	\$ 2,245,014.74	\$ 23,613.36		\$ 2,354,537.76	\$ 0.0601	\$ 172,684.51	Proposed

The KPP numbers are current year. The 2012 proposed are the rates being proposed for next year. The EMP3 numbers are what were modeled based on next years numbers. The KMEA EMP3 numbers are what KMEA provided and projected 2 years out to 2014 so escalated numbers accordingly.

The EMP3 option will allow more flexibility and requires a 3 year term. They are assembling the cities that are interested and plan to file a transmission request beginning February 1, 2012.

The Westar pool will probably form by June of this year. Data is not available at this time to analyze this option compared to the other pools. They can administer the pool at a lower rate but the city will need to obtain their own resources and that has not been determined.

We have talked with Nemaha Marshall and they are interested in serving the city but will have to coordinate within their contract. They can't do a base load service with the city but would entertain a full requirements agreement. Cost would be higher under this scenario.

The contract for the new supply arrangement is scheduled to be completed over the next few months. Currently there is contract language and certain performance threshold requirements that need to be addressed, so should be completed in early 2012.

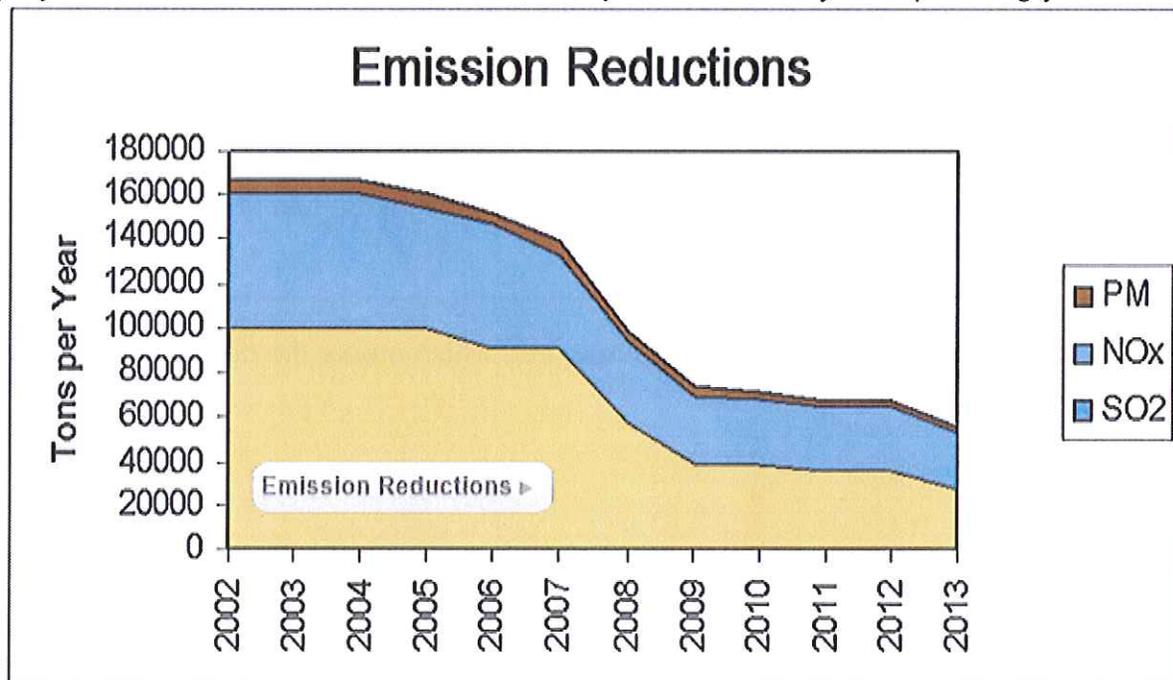
**Environmental Effects:**

To the extent practical, Western customers must minimize environmental effects of new resource acquisitions and document these efforts. IRPs must include a qualitative analysis of environmental impacts in summary format. Describe the efforts taken to minimize adverse environmental effects of new resource acquisitions. Describe how your planning process accounts for environmental effects. Include a discussion of policies you conform with or adhere to, and resource decisions that have minimized or will minimize environmental impacts by you and/or your wholesale electricity supplier(s). Western customers are neither precluded from nor required to include a qualitative analysis of environmental externalities as part of the IRP process. If you choose to include a quantitative analysis, in addition to the summary below, please attach separately. (See 10 CFR § 905.11 (b) (3)).

As part of their involvement with the EMP3 a majority of Seneca's new supply will come from Westar Energy who has publicly stated that they are meeting all the more stringent environmental regulations. The following information has been provided by Westar:

**Environment**

Environmental issues are front and center in the world today and have had that status at Westar for a long time. We have been working with federal, state and local environmental agencies for years to ensure that our operations have the least impact on our natural environment. We deal daily with existing proposed environmental requirements, always searching for a balanced approach. The following chart shows the projected threshold of emissions Westar expects to meet by the upcoming years.



Westar Energy has initiated a variety of programs to preserve the quality of the air, land and water on and around its properties.

These innovative, award-winning projects aid Westar Energy in complying with the Clean Air Act, the National Pollutant Discharge Elimination System and other

environmental requirements.

Under the new supply resource, 80% of the energy will be from the Westar Jeffrey Energy Center which is a coal fired generating station near St Marys Kansas. The following environmental upgrades have been undertaken by Westar to meet current requirements.

### **Scrubber Project**

Existing SO<sub>2</sub> scrubbers have been upgraded from the original design of 60% removal to systems capable of removing more than 95%. All three upgraded scrubbers are in service and are meeting or exceeding our emission rate expectations.

- ✓ **Started:** Third Quarter 2007
- ✓ **Completed:** Second Quarter 2009
- ✓ Investment of \$435 million dollars
- ✓ Sulfur dioxide (SO<sub>2</sub>) emissions reduced by 95+%
- ✓ Co-benefit mercury emissions reduced by 25+%
- ✓ Co-benefit particulate matter reduced by 20+%
- ✓ ~1,343 tons of structural steel.
- ✓ ~475 tons of grating, handrails, platforms, etc.
- ✓ 10,497 cubic yards of concrete used
- ✓ 850 contractors on site at one time
- ✓ More than 2,800,000 total man-hours worked
- ✓ After completion of the scrubber project, a whitish plume can be seen coming out of each stack. The plume is water vapor.

### **Low NO<sub>x</sub> Systems**

To date, two systems have been installed (Units 1 and 3) with the last unit scheduled for installation in the spring of 2011.

Our other resource is our WAPA renewable resource which meets the desired environmental initiatives

**Public Participation:**

Customers must provide ample opportunity for full public participation in preparing and developing an IRP. Describe the public involvement activities, including how information was gathered from the public, how public concerns were identified, how information was shared with the public, and how your organization responded to the public's comments. (See 10 CFR § 905.11 (b) (4)).

This IRP has been conducted over meetings during the following groups:

1. City Staff
2. The City Council appointed Energy Committee
3. Three separate public City Council meetings

The three Council meetings are covered in the local newspaper and aired on local television.

With the help of the city's energy consultant and through the results of these meetings have helped assemble the IRP. Some of the keys issues that have come from these public forums are the desire for the city to maintain their independence, flexibility and control cost. They have inquired about internal generation, the effectiveness of their load control and the importance of public power to the community. They have also voiced concern about waste in regard to electricity losses and a focus, through increased awareness, has been put on controlling the amount of loss the city experiences.

The public will again be invited to review and comment on the IRP during a public comment period from Jan 4<sup>th</sup> through Jan 11<sup>th</sup>. The notice of this review period will be posted in the local paper. There will also be a message printed on the current month electric bill.

The city is also planning to have a survey available for people to comment on issues of most importance to them.

Additional comments will be accepted throughout the year for the yearly updates..

## SECTION 8

## ACTION PLAN & MEASUREMENT STRATEGIES

### **Action Plan Summary:**

Describe the high-level goals and objectives that are expected to be met by the implementation of this resource plan within the 5-year resource planning period. Include longer term objectives and associated time period(s) if applicable. (See 10 CFR § 905.11 (b) (2)) and (See 10 CFR § 905.11 (b) (6)).

The long term goals of Seneca are maintain the lowest cost energy supply for their customers and being a good steward of natural resources and the environment. They also want to be able to supply reliable, stable priced energy to help their community thrive.

This resource plan will help accomplish these goals by creating an avenue to collaborate and work together with neighboring cities to obtain competitive power supply that comes from reliable, environmentally conscious power suppliers.

The city has focused on who they do business with and how they get their power as primary considerations in developing this IRP. Maintaining shorter term options allows us flexibility in the event a supplier changes the way they do business. Seneca believes that the electric industry has changed so much over the years that certain governmental entities such as WAPA are ok to contract long term for power, but caution should be used if entering into long term agreements with private companies that the city has little control over their business practices.

Seneca is committed to advancing the efforts of public power so dealing with public power entities will remain a priority as we have done in the past with WAPA, Brown-Atchison, and the Kansas Power Pool.

The city is hoping to continue its community involvement through comments , suggestions, and increased participation in energy efficiency programs.

**Specific Actions:**

List specific actions you will take to implement your plan over the 5-year planning horizon.

**New Supply-Side Resource Acquisitions:**

List new resource options your organization is planning to implement, investigate, or pursue in the next five years. Include conventional generation, renewable resources, net metering programs, and purchase power contracts. Include key milestones such as the issuing an RFP, executing a contract, or completing a study. (See 10 CFR § 905.11 (b) (2)).

<b>Proposed New Resource</b>	<b>Begin Date</b>	<b>Est. New Capacity (MW)</b>	<b>Milestones to evaluate progress and/or accomplishments</b>
KMEA EMP3	01/01/2014	9	January 1,2013
WAPA	Cont	1	January 1, 2013
Net metering agreement	03/01/2012		March 1,2012
Interconnect agreement for small generation	03/01/2012		March 1,2012

### New Demand-Side Programs & Energy Consumption Improvements:

List energy efficiency, energy conservation, and load management programs your organization is planning to implement or evaluate in the next five years. Include key milestones to evaluate the progress of each program. Insert additional rows as needed. (See 10 CFR § 905.11 (b) (2)).

Example programs could include:

- Education programs & communications
- Energy efficient lighting upgrades
- Energy audits
- Weatherization & Insulation
- Window/doors upgrades
- Boiler, furnace or air conditioning retrofits
- Programmable thermostats
- Equipment inspection programs
- Use of infrared heat detection equipment for maintenance
- Tree-trimming/brush clearing programs
- Electric motor replacements
- Upgrading distribution line/substation equipment
- Power factor improvement
- Loan arrangements for energy efficiency upgrades
- Rebate programs for energy efficient equipment
- Key account programs
- Load management programs
- Demand control equipment
- Rate designs
- Smart meters (Time-of-Use Meters)

Proposed Items	Begin Date	Est. kW capacity savings per year	Est. kWh savings per year	Milestones to evaluate progress and/or accomplishments
Energy Task Force	1/2013	500	1,000 mwh	1/2014
Key Acct Mgt	6/2012	750	1,000 mwh	1/2014
Res. Energy Audits	1/2013	100	200 mwh	1/2014
Rate Design	1/2014	50	100 Mwh	1/2015
Line Clearance Program	1/2013	unknown	unknown	1/2015
Infrared Scanning	1/2014	unknown	unknown	1/2016

**Measurement Strategies:**

Describe your plan to evaluate and measure the actions and options identified in the IRP to determine if the IRP's objectives are being met. The plan must identify and include a baseline from which you will measure the IRP implementation's benefits. (See 10 CFR § 905.11 (b) (6)).

City Staff will meet quarterly on this to determine that task are being done towards meeting the IRP. A report will be given to the City Council energy committee twice a year to update on progress and public council meeting will be updated annually.

The baseline will be calendar year 2011 of how things have been and then document changes and compare against overall usage of city. These changes will be noted and graphed for progress review.

WAPA requires Seneca to provide an annual progress report on the status of the action items they have identified as part of this plan. These updates will address the progress that has been made on each of the items listed in the earlier sections.

**SECTION 9****SIGNATURES AND APPROVAL****IRP Approval:**

Indicate that all of the IRP requirements have been met by having the responsible official sign below; **and** provide documentation that the IRP has been approved by the appropriate governing body (i.e. provide a copy of the minutes that document an approval resolution). (See 10 CFR § 905.11 (b) (4)).

	Mayor
(Name – Print or type)	(Title)
Joe Mitchell	January 18, 2012
(Signature)	(Date)

**Other Information:**

(Provide/attach additional information if necessary)

**IRP Posting Requirement:**

10 CFR § 905.23 of the EPAMP as amended effective July 21, 2008, facilitates public review of customers' approved IRPs by requiring that a customer's IRP be posted on its publicly available Web site or on Western's Web site. Please check the method in which you will comply with this requirement within thirty (30) days of receiving notification the IRP has been approved:

	Customer will post the approved IRP on its publicly available website and send the URL to Western.
X	Customer would like Western to post the approved IRP on Western's website.

**IRP Updates:**

Western's customers must submit updated IRPs every five (5) years after Western's approval of the initial IRP.

**IRP Annual Progress Reports:**

Western's customers must submit IRP progress reports each year within thirty (30) days of the anniversary date of the approval of the currently applicable IRP. Annual progress reports can be submitted using Western's on-line reporting tool, which can be accessed at: [www.wapa.gov/es/irp](http://www.wapa.gov/es/irp)

**RESOLUTION NO. 01182012**

**A RESOLUTION OF THE CITY OF SENECA, KANSAS, TO APPROVE ADOPTION OF AN INTEGRATED RESOURCE PLAN (IRP) FOR THE DEVELOPMENT OF AN ENERGY MANAGEMENT PLAN FOR THE CITY OF SENECA, NEMAHA COUNTY, KANSAS**

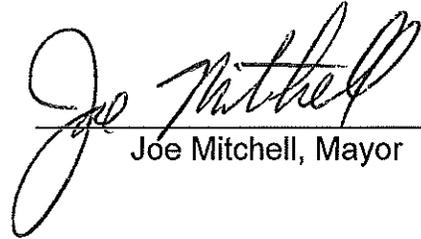
WHEREAS, the City of Seneca, Kansas, has heretofore agreed to purchase and accept delivery of an allocation of Western Area Power Authority (WAPA) resource and thereby is required to comply with the requirements of the Energy Planning and Management Program (EPAMP (10 CRF Part 905)) to meet the objectives of Section 114 of the Energy Policy Act of 1992 (EPAAct) and whereas the development and implementation of an Integrated Resource Plan (IRP) allows the City to meet objectives set forth by Section 114 of the EPAAct. The city has developed said IRP and has made it available to all customers served by the City of Seneca distribution lines for comment;

**BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF SENECA, KANSAS:**

That the City has prepared and reviewed the IRP and that it meets the requirements as set forth above. And, that the Mayor and City Clerk of the City of Seneca, Kansas, are hereby authorized and directed to execute for and on behalf of the City of Seneca, Kansas, the Integrated Resource Plan (IRP), as presented before the City council and public.

Furthermore, the City Administrator, Mayor and City Clerk of the City of Seneca, are hereby authorized and directed to take all necessary action to proceed with the further development and implementation of the IRP on behalf of the City of Seneca, Kansas.

Passed and Approved by the City Council on the 18<sup>th</sup> day of January, 2012.

  
\_\_\_\_\_  
Joe Mitchell, Mayor

Attest:   
\_\_\_\_\_  
Jane F. Strathman, City Clerk

## INTEGRATED RESOURCE PLAN (IRP)

Western Area Power Administration's (Western) customers must comply with the requirements of the Energy Planning and Management Program (EPAMP (10 CFR Part 905)) to meet the objectives of Section 114 of the Energy Policy Act of 1992 (EPAAct). A Western customer is any entity that purchases firm capacity with or without energy, from Western under a long-term firm power contract. Integrated resource planning allows customers to meet the objectives of Section 114 of EPAAct.

Integrated resource planning is a planning process for new energy resources that evaluates the full range of alternatives, including new generating capacity, power purchases, energy conservation and efficiency, renewable energy resources, district heating and cooling applications, and cogeneration, to provide reliable service to electric consumers. An IRP supports utility-developed goals and schedules. An IRP must treat demand and supply resources on a consistent and integrated basis. The plan must take into account necessary features for system operation, such as diversity, reliability, dispatchability, and other risk factors. The plan must take into account the ability to verify energy savings achieved through energy efficiency and the projected durability of such savings measured over time. *(See 10 CFR § 905.11 (a)).*

### **Who May Use This Form:**

Utilities that primarily provide retail electric service that have limited staff, limited resource options, and obtain a significant portion of its energy needs through purchase power contracts are eligible to use this form. Utilities using this form may generate a limited amount of energy if the generating resources are primarily used as back up resources, to support maintenance and outages, or during periods of peak demand.

### **Completing This Form:**

To meet the Integrated Resource Planning reporting requirement, complete this form in electronic format in its entirety. Unaddressed items will be deemed incomplete and the IRP may not be eligible for approval. All of the data fields in this form automatically expand. Additional information may be attached to and submitted with this report. Western reserves the right to require supporting back-up materials or data used to develop this report. If there is any conflict between this form and the requirements defined in EPAMP, the requirements in EPAMP shall prevail.

### **Submit the completed report with a cover letter to:**

Attention: Power Marketing Manager  
Western Area Power Administration  
Rocky Mountain Region  
P.O. Box 3700  
5555 E. Crossroads Blvd.  
Loveland, CO 80539-3003

## EPAMP Overview

The Energy Planning and Management Program (EPAMP) is defined in the Code of Federal Regulations in Title 10, Part 905 (10 CFR 905). The purposes of EPAMP are to meet the objectives of the Energy Policy Act of 1992 (EPAct) while supporting integrated resource planning; demand-side management, including energy efficiency, conservation, and load management; and the use of renewable energy.

EPAMP was initially published in the Federal Register at 60 FR 54714 on October 20, 1995, and revised in 65 FR 16795 on March 30, 2000, and 73 FR 35062 on June 20, 2008. 10 CFR § 905.11 defines what must be included in an IRP.

Western's Energy Services Web site ([www.wapa.gov/es/irp](http://www.wapa.gov/es/irp)) provides extensive information on integrated resource planning and reporting requirements. If you have questions or require assistance in preparing your IPR, contact your Western regional Energy Services representative.

## IRP Content

Cover Page .....	Customer Name & Contact Information
Section 1 .....	Utility/Customer Overview
Section 2 .....	Future Energy Services Projections (Load Forecast)
Section 3 .....	Existing Supply-Side Resources
Section 4 .....	Existing Demand-Side Resources
Section 5 .....	Future Resource Requirements and Resource Options
Section 6 .....	Environmental Effects
Section 7 .....	Public Participation
Section 8 .....	Action Plan and Measurement Strategies
Section 9 .....	Signatures and Approval