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 (EPAct). 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 EPAct.

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) 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

INTEGRATED RESOURCE PLAN (IRP)
5-Year Plan

Customer Name:

IRP History: Check one as applicable.	
	This is the submitter's first IRP submittal.
	This submittal is an update/revision to a previously submitted IRP.

Reporting Dates:	
IRP Due Date:	10/01/2015
Annual Progress Report Due Date:	10/01/2015

Customer Contact Information: Provide contact information for your organization. The contact person should be able to answer questions concerning the IRP.	
Customer Name:	City of Goodland
Address:	PO Box 59
City, State, Zip:	Goodland, KS 67735
Contact Person:	Dustin Bedore
Title:	Director of Electric Utilities
Phone Number:	785-890-4530
E-Mail Address:	Dustin.bedore@cityofgoodland.org
Website:	www.cityofgoodland.org

Type of Customer: Check one as applicable.	
x	**Municipal Utility**
	Electric Cooperative
	Federal Entity
	State Entity
	Tribal
	Irrigation District
	Water District
	Other (Specify)**:**

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 your submit to the U.S. Energy Information Administration (EIA).

Reporting Period	
Reporting Period Start Date (mm/dd/yyyy)	01/01/2014
Reporting Period End Date (mm/dd/yyyy)	12/31/2014
Energy Sales & Usage	
Energy sales to Ultimate End Customers (MWh)	50,591
Energy sales for Resale (MWh)	
Energy Furnished Without Charge (MWh)	
Energy Consumed by Respondent Without Charge (MWh)	
Total Energy Losses (MWh entered as positive number)	2,957
Total Energy Usage (sum of previous 5 lines in MWh)	53,548
Peak Demand (Reporting Period)	
Highest Hourly Summer (Jun. – Sept.) Peak Demand (MW)	12.2
Highest Hourly Winter (Dec. – Mar.) Peak Demand (MW)	9.6
Date of Highest Hourly Peak Demand (mm/dd/yyyy)	07/23/2014
Hour of Highest Hourly Peak Demand (hh AM/PM)	17:00 MT
Peak Demand (Historical)	
All-Time Highest Hourly System Peak Demand (MW)	14.2
Date of All-Time Hourly System Peak Demand (mm/dd/yyyy)	06/27/2012
Hour of All-Time Hourly Peak System Demand (hh AM/PM)	16:00 MT
Number of Customers/Meters (Year End of Reporting Period)	
Number of Residential Customers	2173
Number of Commercial Customers	463
Number of Industrial Customers	58
Other (Specify):	
Other (Specify):	
Other (Specify):	
Other (Specify):	
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.

- The City of Goodland provides electricity to residential, commercial and industrial
  Customers mostly located in the City limits, but with a small quantity outside city limits.

- Area is NW Kansas, flat farming community.

- Customers with significant load are
  Wal-Mart, Hotels, Grain Elevators, Hospital, College and USD 352

- Peak Demand for high users
  Wal-Mart – Usually hot summer day loads
  Hotels – Travel vacation times
  Grain Elevators – During harvest of crops
  College – While class is in session
  USD 352 – While class is in session

- Trends have been declining population and some influx of Low Income households. Our college is growing so we are getting more students.

- Industrial Developments could include growth of our Industrial Park, starting with the Sunflower Plant already located there.

- Outside our service area Midwest Entergy provides Electric Service.

- Our mission is to keep rates low for our customers, but also providing efficient and reliable energy.

- Our current rates are comparable to Midwest Energy with their average being $.11 per KWH for residential and ours being $.127 per KWH.

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.

The City of Goodland has six Electric Production Employees, six Electric Distribution employees and six Administrative Employees.

Resource planning limitations can be directly affected by the economy at this time. Goodland's economy is almost exclusively agriculture related. Another large factor is that Goodland has only one power source that feeds the town. The Municipal Power Plant is the exclusive backup power source for the town.

The City of Goodland is limited due to low cash flow.

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)
2005	12.8	52,530
2006	12.7	54,757
2007	12.8	54,680
2008	11.8	56,073
2009	11.5	54,319
2010	12.4	53,587
2011	12.9	56,736
2012	14.2	57,065
2013	12.5	56,702
2014	12.2	55,870

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)
2015	13.0	57,879
2016	13.1	58,053
2017	13.1	58,227
2018	13.2	58,402
2019	13.4	58,577
2020	13.5	58,906
2021	13.6	59,259
2022	13.7	59,851
2023	13.9	60,449
2024	14.0	61,053

Narrative Statement:

Predicting 1% growth for the next 10 years. Future load expected to flatten out. The City is reaching our growth ceiling and would have to look at adding generation if we have a growth spurt. Housing for work force will be an issue.

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 Goodland has had a power supply contract with Sunflower Electric in various forms starting in the early 1980's to present. In 2009 the City began receiving an allocation of WAPA power, in addition to power received from Sunflower. Goodland relies on Sunflower and its energy portfolio along with WAPA energy to meet the cities energy need. As mentioned before, the City owns and maintains its own power plant for purposes of backup power and peak shaving as well. There is one feed line to the City, seven miles out to connect to Sunflower. This has been and will continue to be our avenue for reliable delivery of power to the City.

City Power plant has complied with RICE/NESHAP rule on 6 generating units.

The City of Goodland has signed a long term contract with Sunflower Electric, suppling power until the year 2027.

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.

Resource Description (Identify resources as base load, intermediate, or peaking)	**Fuel Source**	**Rated Capacity (MW)**	**In-Service Date** (Year)	**Estimated Expiration/ Retirement Date** (Year)
Peaking IC	D.F	5.01	1974	N/A
Peaking IC	D.F	4.30	1978	N/A
Peaking IC	D.F	2.27	1966	N/A
Peaking IC	D.F	2.27	1963	N/A
Peaking IC	D.F	2.07	1971	N/A
Peaking IC	D.F	1.36	1999	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.

Resource Description	**Fuel Source** (If applicable)	**Contracted Demand (MW)**	**Type of Service** (Firm, Non-firm, Requirements, Other)	**Expiration Date** (Year)
WAPA	Hydro	1 MW	Firm	Sept 30, 2024
Sunflower Electric Corp	Coal		Firm	May 31, 2027

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)).

Program Description	Estimated Program Savings (MW and/or MWh if known) (Include annual impact and impact over the life of the program if known.)
Continue with Community Involvement	Unknown
Upgraded switchyard	Unknown
Rate Review every February	Unknown
Have started on LED Lighting changeover program.	Unknown
Tree trimming on system. Also infrared imaging on System loops & feeders.	Unknown
Upgraded tie transformer, oil substation, breakers and switches.	Unknown

SECTION 5	FUTURE RESOURCE REQUIREMENTS AND RESOUCE 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.

Growth on our South loop Business feeder may cause an upgrade to that part of our system.

Pole and conductor upgrades in several neighborhoods will continue, as very low residential growth continues.

The City has limited growth so no need for expansion of our system only minor upgrades.

We have signed a long term 15 year contract with Sunflower Electric Corp. This expires May 2027.

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
W.A.P.A	Allocated thru the year 2024
Sunflower Power Supply contract	Currently in a long term contract expiring in May 2027
Solar Generation	We have had some customers explore options.
Wind Generation	We have had a few companies approach us, but nothing ever came of it.
G.E.C (Proposed Bio-Mass/Coal Plant)	Failed due to lack of funds.
Midwest Energy	Transmission system could not handle our load.

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
The need for upgrading substation at Power Plant	Consult Engineer for Design
Educate consumer on how to become Energy Efficient	This would be one of the easiest ways to help the consumer. Would involve the City attending main functions in town equipped with information.
Rewards for bringing down consumption during peak hours	Offer incentive programs to business when they have reduced consumption during peak periods for 3 consecutive months. Will require smart metering system.
Recycle of old appliance rebate programs	Offer $50 rebate on electric utility bill to customers who have shown proof of purchase of new EE appliance. This rebate is a one-time rebate per appliance.
Changing of building codes to make new construction EE	Very time consuming but worthwhile project to ensure codes for future construction included EE programs.
Upgrade South Loop	Consult Engineer for Design
Upgrade Feeders on City system	Pole and conductor change out, in older areas of town.

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)).*

Sunflower owns and operates all of its transmission and distribution lines, which serves the City of Goodland. Goodland has had a long-standing relationship with Sunflower Electric and it makes sense to continue that relationship for our primary electric energy needs.

SECTION 6	ENVIRONMENTAL EFFECTS

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)).*

The City Power Plant reports annually to KDHE as well as the Department of Energy. Due to the EPA, the RICE/NESHAP Rule has introduced even higher emissions standards that have been met. The City of Goodland spent over $720,000 to meet these Rice Rule requirements. Once the catalytic converter had been installed a micro-pressor will analyze data minute by minute and record that data from the Engine. It will then be monitored by the plant operator and later sent to KDHE for review and approval.

Sunflower Electric does have a % of Renewable Energy Resources. They are currently involved with two wind farms. They also installed a smaller reciprocating plant to follow the wind farm outputs, which will take some of the strain off of Holcomb 1.

The City of Goodland made arrangements to take delivery of WAPA allocations in 2009, which reduces the amount of energy produced using fossil fuels.

SECTION 7	PUBLIC PARTICIPATION

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)).*

IRP has been made available for public viewing on the City of Goodland website. Public can send email response back to City Manager. Notice of such viewing posted on City of Goodland monthly newsletter. Any customer with questions or comments can send City Office or stop in at City office during business hours. City manager will read all signed comments and if needed review with Department heads and City Commission.
Final IRP will also be posted on the Western Area Power Adm. Energy Services website.

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)).*

These will be taking place during our Integrated Resource plan period 2015-2020

- Educate customers about benefits of Energy Efficiency and reducing energy consumed by the City of Goodland.
- Promote Energy Efficiency throughout City properties and business customers.
- Continue implementing Energy Efficiency measures throughout City properties.
- Provide adequate and reliable energy.

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)).*

Proposed New Resource	Begin Date	Est. New Capacity (MW)	Milestones to evaluate progress and/or accomplishments
None			Our capacity is adequate; we are in a multiple year contract.

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
LED Lighting upgraded Street Lights/Christmas Lights	2011-2015			Annual consumption report shows a decrease in consumption.
Infrared Inspections on substation & Distribution System	2012			Less outages due to equipment failure because of poor connections and overheating.
Tree Trimming	On going			Limit outages due to tree limbs on power lines.
Upgrade Distribution System	2011			Consistent voltage to customers in peak demand time. Less outage time.

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)).*

Once a year the IRP will be reviewed by the City Manager and City Commission. Upon approval by both it is submitted to Western Area Power.

Progress is tracked thru monthly and annual review and comparison of consumption. Using a baseline of the previous 5 years average.

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)).*

Gerry Bieker	**City Manager**
(Name – Print or type)	**(Title)**
	10/26/2015
(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

RESOLUTION NO. 1462

RESOLUTION APPROVING THE INTEGRATED RESOURCE PLAN FOR THE CITY OF GOODLAND UTILITIES PERTAINING TO PLANNING FOR NEW ENERGY SOURCES

WHEREAS, the City of Goodland has prepared a Integrated Resource Plan in accordance with Department of Energy Regulations at 10 CFR Part 905, Subpart B for submittal to the Western Area Power Administration in accordance with the regulations; and

WHEREAS, the City of Goodland reviewed the Integrated Resource Plan at its regular meeting on 7th day of December 2015; and

WHEREAS, the City of Goodland has considered all matters it deemed necessary or appropriate to enable it to review, evaluate and reach an informed conclusion as to completeness and approval of the Integrated Resource Plan as supplemented and has determined that the Integrated Resource Plan as supplemented is complete to and in the best interests of the City of Goodland.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF GOODLAND, KANSAS, THAT:

1. The Integrated Resource Plan as supplemented is determined complete and is approved for submittal to the Western Area Power Administration pursuant to Department of Energy Regulations at 10 CFR Part 905, Subpart B, and provides for the overall direction of activities related to providing adequate and reliable electric services; and further.
2. The City Manager of the City of Goodland is authorized and directed to execute such planning activities as are necessary to provide reliable electric energy consistent with the Integrated Resource Plan as supplemented.

Adopted this 7th day of December, 2015.

Annette Fairbanks, Vice-Mayor

CITY OF GOODLAND
CORPORATE SEAL
KANSAS

ATTEST:

Mary P. Volk, City Clerk