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

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

INTEGRATED RESOURCE PLAN (IRP)
5-Year Plan

Customer Name:
City of Fountain, CO

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

Reporting Dates:	
IRP Due Date: July 1, 2016	
Annual Progress Report Due Date:	July 1

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 Fountain, CO
Address:	116 S. Main St.
City, State, Zip:	Fountain, Co 80817
Contact Person:	Curtis Mitchell
Title:	Utilities Director
Phone Number:	719-322-2040
E-Mail Address:	cmitchell@fountaincolorado.org
Website:	www.fountaincolorado.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)	January 1, 2015
Reporting Period End Date (mm/dd/yyyy)	December 31, 2015
Energy Sales & Usage	
Energy sales to Ultimate End Customers (MWh)	213,247
Energy sales for Resale (MWh)	0
Energy Furnished Without Charge (MWh)	0
Energy Consumed by Respondent Without Charge (MWh)	0
Total Energy Losses (MWh entered as positive number)	Not tracked
Total Energy Usage (sum of previous 5 lines in MWh)	213,247
Peak Demand (Reporting Period)	
Highest Hourly Summer (Jun. – Sept.) Peak Demand (MW)	53.13
Highest Hourly Winter (Dec. – Mar.) Peak Demand (MW)	39.51
Date of Highest Hourly Peak Demand (mm/dd/yyyy)	08/06/2015
Hour of Highest Hourly Peak Demand (hh AM/PM)	5:00pm
Peak Demand (Historical)	
All-Time Highest Hourly System Peak Demand (MW)	53.13
Date of All-Time Hourly System Peak Demand (mm/dd/yyyy)	08/06/2015
Hour of All-Time Hourly Peak System Demand (hh AM/PM)	5:00pm
Number of Customers/Meters (Year End of Reporting Period)	
Number of Residential Customers	16,050
Number of Commercial Customers	978
Number of Industrial Customers	0
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 Fountain electric system was established in 1919 to provide electric service to the citizens of the town. Today, the City of Fountain Electric Department serves a certificated service area of over 66 square miles in El Paso County in Colorado, almost two-thirds of the area is outside the City corporate limits. The Fountain electric system is surrounded by the electric systems of Colorado Springs Utilities and the Mountain View Electric Association. Many soldiers at Ft Carson Army Base call Fountain home due to its proximity to the base. The growth and development in Fountain have been influenced by the growth of Ft Carson in recent years. This trend is expected to continue in the years to come.

Electrically, the City is directly interconnected with the electric system of Colorado Springs Utilities at the CSU Fountain Substation. The City does not own or operate any electric generating facilities. Until about 11 years ago, the City purchased its energy requirement from CSU, to supplement its purchase from WAPA. Starting in 2005, the City purchased its supplemental energy requirement from the Municipal Energy Agency of Nebraska. Currently, the City is under contract to purchase its supplemental energy requirement from Twin Eagle Resource Management.

The electric load of the City has grown steadily over the last 10 years. Its summer peak demand has grown from about 43 MW in 2006 to over 53 MW in 2015, while the energy requirement has increased from about 218,000 MWh to over 226,000 MWh during the same period.

At the end of 2015, the Fountain Electric Department had 17,028 customers comprised of 16,050 residential and 978 commercial customers. The five largest commercial customers are: 1) Lowes' Home Improvement, 2) Wal-Mart Superstore, 3) Safeway Store, 4) GHC Dillon Warehouse, and 5) RMB Products. The City has an Industrial Time-of–Use Rate but currently has no customer in this rate class.

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 Fountain Electric Department operates under the direction of the Utilities Director and the Electric Superintendent. There are 29 full-time equivalent employees in the Electric Department providing operations and maintenance, systems planning, metering and warehousing activities. Customer service, including billing and collections, service startup and shut off, and conservation are shared with other City utilities services.

The City purchases wholesale power supply from WAPA and Twin Eagle Resource Management. Twin Eagle is responsible for planning and supplying adequate resources to meet the City's supplemental requirement in excess of the its WAPA allocation.

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)
2006	42.96	218,596
2007	45.99	222,381
2008	44.44	209,657
2009	42.02	205,473
2010	44.12	213,410
2011	48.58	217,146
2012	51.50	220,117
2013	50.66	224146
2014	50.35	218,988
2015	53.27	226,027

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)
2016	55.16	228,649
2017	57.27	231,302
2018	59.45	233,985
2019	61.74	236,699
2020	64.11	239,445
2021	66.56	242,222
2022	69.11	245,032
2023	71.75	247,874
2024	74.50	250,750
2025	77.35	253,658

Narrative Statement:

The population of El Paso County in the Pikes region is expected to grow at an average annual rate of 1.7%. For the City of Fountain, due to the close proximity to Ft Carson and being along the I-25 corridor, the projected average annual growth rate is expected to be close to 2.5%. This population growth will propel more commercial and industrial development in the City and in its service territory.

The City projects higher peak demand growth in relation to its energy growth. Air-conditioning units are installed in most new homes resulting in higher summer peak demand. On the other hand, efficient lighting and major appliances and energy conservation tend to partially offset energy consumption growth. These factors contribute to the reduction in the City's electric annual load factor over the next 10 years, from about 47% in 2016 down to about 37% in 2025.

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)).*

Besides the Firm Electric Service contract with WAPA, the City has a supplemental Partial Requirement contract with Twin Eagle Resource Management. This is a 10.5-year contract that started on July 1, 2015 and will expire on December 31, 2025. The City does not operate any generating resources. Twin Eagle is responsible for planning, operations and management of all supply-side resources to supply the City's supplemental requirement in excess of the WAPA allocation.

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)
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)
Western	Hydro	2.298 MW-Summer 1.93 MW-Winter	Firm	2054
Twin Eagle Resource Management	Purchase Power, not unit or fuel source specific		Supplemental requirement-Firm	2025

Resource Description	Fuel Source (If applicable)	Contracted Demand (MW)	Type of Service (Firm, Non-firm, Requirements, Other)	Expiration Date (Year)

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.)
LED Lights Replacement Program- City provides LED light bulbs to its customers.	New program. Unknown at this time.
Washing Machine Rebate ($100)	Energy Star-rated washing machine saves water and reduces water heating cost.
Shower Head Exchange Program	New showerheads conserve water usage and reduce water heating cost.

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.

The City has no need for any new power supply resource additions to meet its electric energy requirement for at least the next nine years. The Twin Eagle contract provides all supplemental energy to meet the City energy requirement in excess of the amount supplied by WAPA under the Firm Electric Service Contract.

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
No New Resources required	

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
Smart Thermostats	Energy conservation and peak demand reduction for residential and commercial customers
Building Efficiency Upgrades	Focus on upgrading city-owned facilities when budget permits or through grants
Public Outreach	Publish specific newsletter on conservation and energy efficiencies at least twice a year. Promote conservation and energy efficiency at community events

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 had a supplemental requirement power supply contract with Municipal Energy Agency of Nebraska that expired on June 30, 2015. In early 2014, the City issued a Request for Proposal for supplemental power supply beginning July 1, 2015. The City received seven proposals for five different suppliers. Twin Eagle was the selected supplier because it provided the best proposal to the City taking into consideration of price, and price certainty, risk, and length of the contract. The new contract provided significant savings to the City and the Electric Department was able to reduce the electric rates to all its customers.

The City Council reviewed and approved the contract with Twin Eagle in the summer of 2014 in open session.

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)).*

Renewable energy was included in the 2014 RFP as a energy supply option, but not a requirement. The proposal from Twin Eagle Resource Management did not specify renewable energy resource in the supply portfolio.

Unless as consented to by Twin Eagle, the City is required to purchase all requirement capacity and energy in excess of that supplied by WAPA from Twin Eagle. Hence the City is not contemplating addition of renewable resources in the near future.

The Twin Eagle contract would not prohibit customer-owned renewable resources installed under the net metering arrangement.

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)).*

The existing power supply contract with Twin Eagle was a result of an open Request for Proposal process in 2014. The final recommendation was brought to the City Council and the contract was approved by the Council in open session.

All demand side programs were presented to and approved by the City Council in open session. The progress of these programs was presented to the City Council in open session periodically.

The City has published a public notice to hold a public hearing on Tuesday, July 12 at 6pm in the City Council Chambers to solicit public inputs on the IRP and for the City Council to consider approval of the IRP.

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)).*

1. Meet with Twin Eagle Resource Management to discuss the possibility of allowing the City to replace a portion of the purchase under the Purchase Power Agreement with renewable energy resource options
2. Promote energy efficiency and water conservation (they tend to go hand-in-hand together)
3. Implement energy efficiency measures at City-owned facilities
4. Promote reliability by expanding transmission/distribution system to provide loop feed to all customers
5. Reduce distribution system energy losses

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
N/A			

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. MWh savings per year	Milestones to evaluate progress and/or accomplishments
Enhanced LED Lighting Program	2016		1,000	Energy savings in comparison to incandescent light bulbs
Customers Outreach Program through newsletters	2017			Promote and educate customers on the benefits of energy efficiency and conservation
Reduce Distribution System Losses	2018			Establish benchmark for measuring system losses

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)).*

The City will use 2015 as the baseline for measurement.

The City will develop a plan to track the following activities and report the results in the subsequent annual updates:

1. Feedbacks and suggestions from customers
2. Energy savings from demand side measures
3. Progress of the programs and feedback will be presented to the City Council

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)).*

Gabriel P. Ortega (Name – Print or type)	Mayor (Title)
Gabriel P. Ortega (Signature)	7-12-16 (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

F. **Public Hearing Approval of the City of Fountain Electric Integrated Resource Plan (IRP)**

Mayor Ortega opened the public hearing.

Utility Director Mitchell reported this is a new requirement triggered by our new electric supply contract. By contracting with WAPA, this is now a requirement.

Mayor Ortega closed the public hearing.

Council Member Lauer made a motion to approve the Electric Integrated Resource Plan, seconded by Mayor Pro Tem Thomas. All members voted yes (6-0); the motion carried.