

CIPCO 5-Year Integrated Resource Plan (IRP)

**as filed with
and
approved by**

**Western Area Power
Administration (WAPA)**

2007

This IRP represents the collective interests of CIPCO and its individual RECs and SIMECA municipal utilities, as named, in accordance with WAPA's Member-Based Association (MBA) filing status.



CIPCO WAPA IRP

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Section I

Final WAPA approval letter (6/15/07)



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Department of Energy
Western Area Power Administration
Upper Great Plains Region
P.O. Box 35800
Billings, MT 59107-5800

JUN 15 2007

RECEIVED

JUN 19 2007

CENTRAL IOWA POWER
COOP

COPY

Mr. Craig E. Fricke
Chief Operating Officer/Vice President
Business Operations
Central Iowa Power Cooperative
1400 Highway 13 Southeast
Cedar Rapids, IA 52406-2517

Dear Mr. Fricke:

Thank you for submitting your response to Western comments on the Central Iowa Power Cooperative (CIPCO) 5-Year Integrated Resource Plan (IRP) submitted to Western on February 28, 2007. Western has reviewed your responses as compared to the requirements for Integrated Resource Planning under part 905 Energy Planning and Management Program.

Upon review of your responses and commitment to address the requirements identified under section 905.11 Western will append this response to your 2007 IRP. As such, Western does hereby approve the 2007 CIPCO IRP. I would also like to take this opportunity to recognize the effort and value CIPCO places in the resource planning process.

Please visit Western's Energy Services Website for additional details and information on the energy services available to you at www.wapa.gov.es. If you have any questions, please telephone your Field Representative Tracy Thorne at (605) 353-2716 or Mike Radecki at (406) 247-7442.

Sincerely,

1s/ Doug Hellebronn
for Robert F. Riehl
Power Marketing Manager

Section II

**Initial CIPCO IRP submittal to WAPA
(2/28/07) transmitting Board resolution
(2/27/07) and proposed Plan (2/1/07)**

February 28, 2007

Via UPS: Letter, Board Resolution, and IRP Plan

Mr. Michael Radecki
Regional Energy Service Manager
Western Area Power Administration
Upper Great Plains Regional Office
2900 Fourth Avenue North
Billings, Montana 59101-1266

Dear Mr. Radecki:

Enclosed with this transmittal letter are two (2) copies of the February 2007 Central Iowa Power Cooperative (CIPCO) Integrated Resource Plan (IRP) along with one (1) original and one (1) copy of the executed February 27, 2007, CIPCO Board Resolution approving said IRP.

This filing is being submitted via Member-Based Association (MBA) status to the Western Area Power Administration (WAPA) in accordance with the requirements of the Energy Policy Act of 1992, Public Law 102-486 Section 114, Title II - Integrated Resource Planning, and Department of Energy, 10 CFR Part 905, Energy Planning and Management Program. This MBA filing by CIPCO represents the collective interests of its individual members including: Clarke Electric Cooperative, Inc.; Consumers Energy; East-Central Iowa Rural Electric Cooperative; Eastern Iowa Light and Power Cooperative; Farmers Electric Cooperative, Inc.; Guthrie County Rural Electric Cooperative Association; Linn County Rural Electric Cooperative; Maquoketa Valley Electric Cooperative; Midland Power Cooperative; Pella Cooperative Electric Association; South Iowa Municipal Electric Cooperative Association (SIMECA) representing the Iowa municipals of Bellevue, Brooklyn, Cascade, Corning, Earlville, Fontanelle, Gowrie, Greenfield, Lamoni, Lenox, Orient, Stuart, Villisca, and Winterset; Southwest Iowa Rural Electric Cooperative, Inc.; and T.I.P. Rural Electric Cooperative.

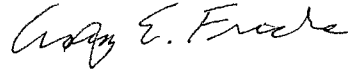
The enclosed IRP contains valuable, proprietary information of CIPCO and must remain confidential. Based on competitive experiences and the possibility of regulatory reform, we are very concerned about maintaining confidentiality of data which may be useful to potential competitors. By receipt of our IRP, the holder agrees not to copy the document or disclose its contents without the written consent of CIPCO.

Specifically, we are requesting that our IRP remain confidential throughout the Western Area Power Administration review process and that the documents (2) be returned to CIPCO when the review is completed. We also request that our IRP not be copied or distributed in any manner. Copies of our IRP will be retained at the offices of CIPCO for any future WAPA review.

Should you have any questions about our request for confidential treatment or about our IRP filing, please call me at 1-800-373-8011, extension 314, or call Dave Duncan at extension 327.

Very truly yours,

CENTRAL IOWA POWER COOPERATIVE



Craig E. Fricke
Chief Operating Officer/Vice President of
Business Operations

lkc

Enclosures (2)

c: (with enclosures): Dennis L. Murdock, CEO, CIPCO
Jerry D. Barker, Director, Enterprise Risk Management, CIPCO
David K. Duncan, Manager of Resource Planning, CIPCO
Chad Herrick, Energy Data Specialist, CIPCO
CIPCO Member RECs and SIMECA Municipals

CERTIFICATE

I, Allan Duffe, do hereby certify:

That I am the duly elected, qualified and acting Secretary-Treasurer of CENTRAL IOWA POWER COOPERATIVE (hereinafter called the "Cooperative") and the keeper of its records; that at a regular meeting of the Board of Directors of the Cooperative with a quorum of directors present in person, held February 27, 2007, the following resolution was unanimously adopted:

WHEREAS, the Energy Policy Act of 1992, Public Law 102-486 Section 114, Title II - Integrated Resource Planning required by the Department of Energy to develop, promulgate, and enforce rules requiring Power Marketing Authorities to implement integrated resource planning; and,

WHEREAS, Department of Energy, 10 C.F.R. Part 905, Energy Planning and Management Program rules require Power Marketing Authority (hereinafter PMA) customers to file Integrated Resource Plans; and,

WHEREAS, the Western Area Power Administration (hereinafter WAPA) is a PMA; and,

WHEREAS, the Cooperative is a WAPA customer, and must comply with these rules; and,

WHEREAS, this Member-Based Association (hereinafter MBA) filing by CIPCO represents the collective interests of the individual member utilities it serves including: Clarke Electric Cooperative, Inc.; Consumers Energy; East-Central Iowa Rural Electric Cooperative; Eastern Iowa Light and Power Cooperative; Farmers Electric Cooperative, Inc.; Guthrie County Rural Electric Cooperative Association; Linn County Rural Electric Cooperative; Maquoketa Valley Electric Cooperative; Midland Power Cooperative; Pella Cooperative Electric Association; South Iowa Municipal Electric Cooperative Association (SIMECA) representing the Iowa municipals of Bellevue, Brooklyn, Cascade, Corning, Earlville, Fontanelle, Gowrie, Greenfield, Lamoni, Lenox, Orient, Stuart, Villisca, and Winterset; Southwest Iowa Rural Electric Cooperative; and T.I.P. Rural Electric Cooperative.

NOW, THEREFORE, BE IT RESOLVED, that the Cooperative approve the WAPA IRP Report dated February 01, 2007; and,

BE IT FURTHER RESOLVED, that the Cooperative file the WAPA IRP Report with WAPA as an MBA.

That said resolution has not been amended, altered, rescinded or modified, and is presently in full force and effect.

IN WITNESS WHEREOF, I have executed this certificate and attached a corporate seal of the Cooperative this 27th day of February A.D., 2007.


Secretary-Treasurer

(CORPORATE SEAL)

**CENTRAL
IOWA
POWER
COOPERATIVE**

Cedar Rapids, Iowa



INTEGRATED RESOURCE PLAN

February 01, 2007

STATEMENT OF CONFIDENTIALITY

This document contains valuable, proprietary information of Central Iowa Power Cooperative (CIPCO) and must remain confidential. Based on recent competitive experiences and the possibility of regulatory reform, we are now very concerned about maintaining confidentiality of data which may be useful to potential competitors. By receipt of this document, the holder agrees not to copy the document or disclose its contents without the written consent of CIPCO.

Specifically, we are requesting that this document remains confidential throughout the Western Area Power Administration (WAPA) review process and that the document be returned to CIPCO when the review is completed. We also request that this document not be copied or distributed in any manner. Copies of this document will be retained at the offices of CIPCO for any future WAPA review.

INTEGRATED RESOURCE PLAN

FOR

**CENTRAL IOWA POWER COOPERATIVE
CEDAR RAPIDS, IOWA**

February 01, 2007

Respectfully submitted,

CENTRAL IOWA POWER COOPERATIVE
1400 Highway 13 SE
PO Box 2517
Cedar Rapids, Iowa 52406-2517
(319) 366-8011

CENTRAL IOWA POWER COOPERATIVE INTEGRATED RESOURCE PLAN February 01, 2007

INTRODUCTION

The Central Iowa Power Cooperative (CIPCO) Integrated Resource Plan (IRP) reviews the CIPCO Systems' third IRP, for 2007, and is being submitted via Member-Based Association (MBA) status to the Western Area Power Administration (WAPA) in accordance with the requirements of the Energy Policy Act of 1992 (EPAct), Public Law 102-486 Section 114, Title II - Integrated Resource Planning, and the Department of Energy, 10 CFR Part 905, Energy Planning and Management Program.

This MBA filing by CIPCO represents the collective interests of the individual utilities it serves including: Clarke Electric Cooperative, Inc.; Consumers Energy; East-Central Iowa Rural Electric Cooperative; Eastern Iowa Light and Power Cooperative; Farmers Electric Cooperative, Inc.; Guthrie County Rural Electric Cooperative Association; Linn County Rural Electric Cooperative; Maquoketa Valley Electric Cooperative; Midland Power Cooperative; Pella Cooperative Electric Association; South Iowa Municipal Electric Cooperative Association (SIMECA) representing the Iowa municipals of Bellevue, Brooklyn, Cascade, Corning, Earlville, Fontanelle, Gowrie, Greenfield, Lamoni, Lenox, Orient, Stuart, Villisca, and Winterset; Southwest Iowa Rural Electric Cooperative; and T.I.P. Rural Electric Cooperative.

CIPCO, as a consumer-owned, nonprofit cooperative, has always been committed to providing reliable and economical service to its member consumers. Integrated resource planning is assisting the Cooperative and its 13 member systems in accomplishing this goal. By assessing a broad range of available supply- and demand-side resource options, the integrated resource planning process has supported the efforts of the CIPCO Systems in evaluating the impact of individual programs that strive to improve the standard of living of their residential membership and the profitability of their commercial, industrial and farm consumers.

In 2006, CIPCO provided over 2,518 GWhs in sales and energy services to its member systems through a resource base of:

- CIPCO-owned or leased generation resources;
- Bulk power purchases and interchange;
- Member-municipal-owned generation resources;
- Pooling of transmission and generation facilities with IES Utilities;
- Power Purchase Agreements (including renewable energy resources);
- Firm power commitments from WAPA; and
- A menu of DSM programs.

Utilizing these resources, CIPCO served a one-hour peak demand of 543 MW occurring in July 2006.

To better address the Cooperative's energy service needs, the following objectives have been established for this plan:

- Provide for the energy service needs of the members in a reliable and low cost manner;
- Reduce adverse environmental effects;
- Maintain a diversity of resource commitments that promote adequate flexibility to respond to uncertainties and changing market conditions;
- Manage wholesale and retail market risks;
- Provide documentation of CIPCO's IRP efforts for submittal to WAPA;
- Retain a balanced and diversified fuel portfolio; and
- Ensure the overall system cost remains within competitive boundaries.

IDENTIFICATION OF RESOURCE OPTIONS

Supply-Side Resource Options

A wide range of new supply-side resource options was examined, including the following options:

- Power purchase agreements;
- Power sale agreements;
- Renewable resources; and
- Baseload coal plants.

Through resource evaluations, the following new options are being aggressively pursued with intent to implement:

- Power purchase agreements;
- Power sale agreements;
- Renewable power purchases; and
- Construction of a new baseload unit.

The following new option is currently under construction:

- Joint construction, ownership and operation of a new base load coal unit (Council Bluffs Unit #4).

Demand-Side Resource Options

In 2001, CIPCO employed a consultant to aid in the establishment of potential load management and efficiency alternatives for its review. A report was developed to help CIPCO identify methods to strategically manage electrical load while reaching a maximum number of member consumers and providing benefits to a proportionate share of its diverse customer base.

A local, regional, national, and international scan of utility-based DSM programs was conducted to identify an appropriate group of technologies and strategies that applied specifically to CIPCO's service territory and unique cooperative structure. From an original group of 140 programs, a list of programs that spanned across various technologies, implementation strategies, and customer sets were developed to provide a balanced marketing effort. Implementation of these programs began in 2003.

The DSM programs currently offered by CIPCO remain essentially the same as those implemented in 2003. Equipment qualifiers as well as incentive amounts have been changed since that time. Most program adjustments have been in response to new Energy Star and federal minimum efficiency standards (e.g. Water heaters and Air Conditioners) which have led to stricter program requirements.

Other modifications to these programs have been a result of discussions held with employees from the member cooperatives that implement the programs at the local level. We hold several meetings a year, where members have the opportunity to discuss issues related to the DSM programs being offered by CIPCO. Based on these discussions, CIPCO has re-evaluated some of these programs and made adjustments with the intent to improve their implementation and effectiveness.

DSM Program Portfolio

The following list contains the base set of programs that CIPCO currently has in its portfolio. These programs will continue to be offered in 2007 and evaluated on an annual basis. While there are no immediate plans to eliminate or add specific DSM programs, results from ongoing program evaluations, introduction of new technologies and public input could be cause for some amendments to this portfolio during the period covered by this IRP Plan.

Figure.1. CIPCO DSM Programs

Program Name	Market	Program Detail
Air Conditioner Rebate	Residential	Incentives for Energy Star AC to help reduce CIPCO summer peak. Customer signs agreement to allow future load control.
Premium Water Heater Rebate	Residential, Agricultural	Ensures efficiency of new loads and replacements. With incentive, customer signs agreement to allow future load control.
Geothermal Heating Program	Residential, Commercial	Continue incentives to drive this renewable load growth strategy.
Air Source Heat Pumps	Residential, Commercial	Continue incentives for this efficient load growth strategy.
Energy Star Appliances	Residential	Increase efficiency through a very visible brand name. Increase Public Profile of appliance and home rebates.
ALL-STAR Home Home)	Residential	Incentive for efficient all-electric home construction to promote electricity, reduce heating/cooling costs and help reduce required size of heating and cooling equipment.
Integrated Services	Industrial, Agricultural	Strategic, business focused method to incorporate many efficiency measures through use of expert third party services.
Variable Speed Drive	Commercial, Indust., Ag.	Incentive to significantly reduce fan, pump and motor energy use
Dairy Pre-cooler Rebate	Agricultural	Program targeted at small family farms with poor load factor.
Air Quality System Rebate	Residential	Rebate that improves both energy efficiency and IAQ issues, providing impact from a Public Perception perspective as well.
High Efficiency Motor Rebates	Commercial, Indust., Ag.	A rebate for NEMA Premium motors ranging in size from 2 to 200 horsepower. The rebate varies with the size of the motor.

Interior Lighting Rebate Program	Residential, Commercial, Indust., Ag.	Incentives for energy star compact fluorescents and T-8 lamp fixtures with electronic ballasts that reduce energy used typically during peak
Outdoor Security Lighting Rebates	Residential, Commercial, Indust., Ag.	Incentives for efficient lighting that replaces older mercury vapor lighting and new fixtures that add strategic load to non-peaking night-time hours.

General DSM Program Review Considerations

The key elements of the program planning and selection process are to identify and evaluate:

- Key consumer characteristics that influence acceptance and response to targeted programs
- Key utility considerations affecting resource requirements, local conditions and other unique characteristics that a group of cooperatives find important

Among the consumer characteristics that influence a program's success are demographics, income, knowledge and awareness, attitude and motivation, price experience, rates of return, costs of capital, fit with corporate culture and so on. External variables such as economic conditions, energy prices, technologies, regulation, and tax credits also influence consumer's decisions.

The utility's considerations focus on the interaction of load shape changes and supply-side resources options, transmission and distribution effects, and member, local community, group resources and individual member cooperative considerations.

DSM Evaluation Criteria

A set of general evaluation criteria that CIPCO uses to evaluate DSM programs include:

- Load Shape
- Participation Factor
- Energy & Demand Impact
- Public Perception
- Availability of Channel Partners
- Marketing Considerations
- Program costs

ACTION PLAN

The Action Plan reflects CIPCO's commitment to specific activities as outlined in this IRP. Completing the action items will assist the CIPCO System in meeting its service, reliability, cost, and risk management objectives.

Supply-Side Action Plan

In addition to maintaining the existing system facilities, CIPCO plans to accomplish the following action items to expand the Cooperative's power supply and improve system efficiency.

1. Continue to utilize the 20 MW of new and proposed new peaking capacity added and being added by CIPCO's municipal customers since January of 2001.

2. Continue co-ownership participation in MidAmerican Energy's new coal-fired generating unit in Council Bluffs, Iowa. MidAmerican is constructing a new 790 MW coal-fired unit on the site of its existing Council Bluffs Energy Center Complex. CIPCO purchased a 9.01% ownership share of the new unit. Transmission service in and around Iowa continues to be constrained. By MISO exerting control over the transmission assets in the region, congestion is being managed and mitigated, but the initiation of significant transmission infrastructure improvements is yet to develop. In the meantime, new base load resources are still needed in Iowa and in the MISO footprint.
3. Continue scanning the region for opportunities to gain ownership shares of other newly planned generating units.
4. Buy and/or sell capacity and energy, as needed, to supplement CIPCO's owned resource base in order to optimize our resource mix. CIPCO regularly enters into power purchase and sale agreements in order to ensure reliability and enhance overall system economics. This typically includes a mix of seasonal and monthly peaking capacity purchases to meet MAIN/MRO load and capability requirements, and baseload capacity and energy purchases to minimize energy costs. If it is determined the system is carrying excess capacity, attempts are made to market the excess to external parties.
5. Continue to participate, through a power purchase agreement, in FPL Energy's 100 MW Hancock Wind Farm in Hancock County, Iowa.
6. Explore the feasibility of adding other renewable energy resources to the mix, such as adding waste-heat generator technology or purchasing power from a biomass-fueled facility. CIPCO is actively evaluating and pursuing expansion of its renewable resource base in order to further diversify its supply portfolio, serve customer preferences and to comply with emerging legislative and regulatory requirements.

DSM Action Plan

- Continue to implement and evaluate the DSM programs described in this report.
- Perform a thorough analysis of the overall cost-effectiveness of CIPCO's core incentive programs. This need is driven by the recent escalation of DSM program costs. As part of this undertaking, CIPCO will attempt to determine what level of market transformation has taken place within the equipment categories covered by its current program offerings.
- Investigate new technologies and identify equipment that might be more effective at helping CIPCO achieve its DSM objectives.

The impacts expected from implementation of CIPCO's DSM program portfolio are shown below. While these programs will continue to be offered in 2007 and evaluated on an annual basis, the impacts shown assume that these programs will continue through the entire five year period covered by this report. Results from ongoing program evaluations, introduction of new

technologies and public input could be cause for changes in these programs. Such a change, or a shift in the focus of our marketing efforts, could significantly alter the participation in any one of these programs.

Demand-Side Management Impact Estimates				
Demand-Side Activity	Five Year Action Plan*			
	Number of New Units	kWh Impacts	kW Impacts	Incentive Costs
Air Conditioner Efficiency	4,373	-4,739,494	-1,697	\$515,974
Air Source Heat Pump	1,531	36,520,601	-531	\$688,903
Geothermal Heat Pump	4,510	78,285,602	-1,854	\$5,592,600
Premium Water Heater	13,863	70,032,729	6,042	\$3,410,351
Heat Plus (heat rate)	490	20,716,879	0	\$49,000
Energy Star Appliances	13,954	-7,034,245	-823	\$460,468
Residential Lighting	78,464	-12,092,954	-2,441	\$156,928
Commercial Lighting	32,695	-4,924,038	-143	\$147,126
Outdoor Lighting	9,043	1,558,474	46	\$266,768
Motors/Drives	259	-2,105,818	-266	\$310,236
Dairy Pre-cooler	65	-1,144,133	-218	\$23,400
All-Star Home	337	<i>Included w/ heating programs</i>		\$84,176
Indoor Air Quality	1,554	0	0	\$77,678
TOTAL		175,073,605	-1,885	\$11,783,607

*Sum of annualized impacts from program participation starting 1/1/07. Only summer demand impacts shown.

Transmission System Action Items

CIPCO's transmission system activities are developed to keep pace with industry standards and to meet or exceed Rural Utilities Services (RUS) guidelines. CIPCO adheres to a generally accepted "cooperative standard" and our planning and work programs are much like that of any other cooperative across the state. The transmission system upgrades and maintenance are an on-going effort; the goals remain much the same from one planning period to the next. The following action items have been identified as important activities related to the transmission system that should be accomplished as part of this integrated resource plan.

1. Support and monitor transmission access and usage rulings, such as Order No. 888 and Order 889, issued by the Federal Energy Regulatory Commission (FERC) in April 1996 and Order No. 2000 issued in December 1999.

CIPCO supports and monitors the developments associated with open access rulings, and actively participates in providing and purchasing transmission services. CIPCO monitors trends impacting the regional power industry and maintains a strong presence in the Mid-Continent Area Power Pool (MAPP) and the Midwest Reliability Organization (MRO). CIPCO representatives participate in committees involving

management, regional transmission, regional reliability, power and energy marketing, computer model building, accreditation, transmission schedules and compensation, sub-regional planning and our relations.

CIPCO monitors progress toward a merger of some MAPP functions into the Midwest Independent System Operator (MISO) organization. CIPCO is a customer of the MISO. CIPCO has and will continue to evaluate and consider involvement in the regional transmission organizations.

2. Continue to meet the RUS guideline of one hour of outage per consumer per year.

CIPCO's commitment to reliability and service quality is illustrated in the positive system outage figures. The average outage hours, for the most recent five years (from 2001 – 2005), is 0.82 hours per customer per year. CIPCO's five-year average of outage hours per customer from 1996 – 2000 was 1.15. The decreasing numbers in recent years support the importance of our commitment to on-going system replacements, upgrades, expansion, and maintenance programs.

3. Continue to participate in joint transmission operations and maintenance activities with neighboring utilities.

Through agreements with MidAmerican Energy Company (MEC) and Alliant Energy Company, CIPCO actively participates in joint transmission operations and maintenance activities. Specifically, the joint O & M activities include, but are not limited to:

- a. Regular and special substation maintenance, e.g., protective relaying, Doble testing and infrared thermal scans
- b. Pole ground-line treatment
- c. Major line maintenance, i.e., hardware tightening, cross-arm replacements and retying conductors
- d. Special line maintenance, e.g., replace arresters, install ground rods and mid-span spacers
- e. Switch maintenance and inspection
- f. Right-of-way clearing
- g. Resistivity measurements of grounding connections
- h. New to Replace Old program (systematic efforts to rebuild older portions of the transmission system at voltage levels of 34.5 and 69 kV)

- i. Breaker New to Replace Old program (focus on eliminating aging oil-filled breakers)

External Issues Action Items

As part of the Integrated Resource Plan, a number of external issues have been identified as key factors in CIPCO's decision-making process. To continue its commitment to providing reliable, economical power to its member systems, the Cooperative developed a plan of action to assist in recognizing these external components of the IRP and including the expected impacts in an accurate and meaningful manner.

1. Continue to monitor and evaluate CIPCO's regulatory compliance and government relations regarding state and federal environmental laws. CIPCO plans to maintain its responsibilities to the Iowa Environmental Group, which was developed by CIPCO and three other organizations to work closely with regulators to protect both the environmental and economic interests of the members.
2. Evaluate the environmental impacts of various new resource acquisitions and options. This remains important in future assessment of renewable resources and the comparison to existing resources.

Planning Process Action Items

CIPCO has accomplished a great deal through the advancement of integrated resource planning. This dynamic process has allowed the CIPCO System to remain flexible to adequately plan for and respond to the changing conditions in the electric wholesale and retail markets. It has allowed us to frame a robust supply, sales and demand response portfolio to serve our members' needs.

CIPCO's resource mix must be economically sound and diverse, and be flexible enough to leverage emerging market opportunities and minimize risk over time. We will assure adequate energy availability by diligently managing our power supply portfolio. Economic and risk analyses are performed on a continuous basis. We have mature analytic and research processes whereby we can reasonably predict our short-term and long-term resource needs. Research studies carried out with our member cooperatives help us understand retail customers by identifying factors that influence their purchase decisions and energy use patterns. The knowledge gained from these research efforts is integrated with our ongoing power supply portfolio evaluations to achieve efficiencies in managing our diverse native generation fleet as supplemented with moderate levels of power purchases.

ENVIRONMENTAL EFFECTS

CIPCO remains in compliance with all laws, rules and regulations, especially as they relate to clean air and the environment. This holds true for the day-to-day management and operation of existing resources and will remain true for the upgrading, refurbishment and retirement of existing resources, and for new resource additions.

CIPCO continues to be a joint owner of a new base load coal unit being constructed in Council Bluffs, Iowa. This unit will burn low-sulfur western coal and will be outfitted with state-of-the-art pollution control equipment. CIPCO instituted a fuel blending process at its Fair Station generation plant using low-sulfur coal and resulting in reduced SO₂ emissions. CIPCO executed a contract to purchase wind power from Alliant Energy from a wind farm in Hancock County, Iowa. The energy purchased from this project reduces the need to purchase energy from fossil-fueled plants. CIPCO has a price schedule based on our avoided costs for use by Qualifying Facilities. CIPCO also has a menu of DSM programs which encourage the installation of energy-efficient equipment. These actions are a few of the ways CIPCO is minimizing adverse environmental effects.

PUBLIC PARTICIPATION

As mentioned above, CIPCO remains in compliance with all laws, rules and regulations. CIPCO and/or its agents (including partners in the construction, ownership and operation of jointly-owned power plants and transmission facilities) have and will continue to seek and give serious consideration to participation by the public as new supply-side resources are planned, proposed and move through the necessary jurisdictional approval processes. CIPCO works closely with its member systems in the evaluation, selection and implementation of demand-side resources.

CIPCO's Board of Directors comprises one representative from each member system. The CIPCO Board Resolution approving this IRP is included as part of CIPCO's WAPA IRP Plan report.

LOAD FORECASTING

CIPCO has an extensive and well-established load forecasting program. Preparation of the CIPCO Load Forecast is an integrated effort with significant input from CIPCO staff, member-system managers and staff, a load forecasting consultant, and the Rural Utilities Service (RUS).

CIPCO's 20-year Load Forecast provides the foundation for the integrated resource plan. Several methodologies are used in developing the load forecast including combined end-use/econometric models for residential loads, individual projections of large commercial loads, econometric models of general commercial loads, and trended projections of historical data for the smaller load classes. Forecast scenarios are completed to consider the impacts of extreme weather and varying rates of economic growth as well as projected customer participation in demand-side management and energy efficiency programs.

A copy of CIPCO's Load Forecast will be retained at CIPCO and made available for loan to WAPA for their review upon request.

MEASUREMENT STRATEGIES

CIPCO's resource assessment process provides the Cooperative with a menu of options that facilitate the development of a strategy of resource acquisition intended to meet the energy

service needs of its members while maintaining or reducing system costs, maintaining or improving reliability, managing wholesale and retail risks, and minimizing adverse environmental impacts.

Screening tests (e.g., assessment of technical and market potential) are performed and evaluation criteria (e.g., limitations, feasibility, and cost/rate/financial impacts) are established for the selection and integration of resources into CIPCO's resource mix.

CIPCO's "basecase" is its current Financial Forecast. Potential resources are compared to Financial Forecast assumptions and results, and are integrated into the succeeding Financial Forecast update after they have been selected for implementation. CIPCO performs sensitivity analyses to assess the impacts of uncertainty in the evaluation process and to determine a range of possible outcomes.

Impacts for implemented DSM programs will be measured by actual participation rates. These measured values are typically multiplied by average participant impacts for each program. The average energy and demand impacts are based on typical equipment performance variables, available customer choices without a program in place and likelihood that the customer would choose any one alternative.

CONCLUSION

CIPCO began systematic integrated resource planning (IRP) efforts in the early 1990s. CIPCO views integrated resource planning as an important and necessary business development tool. Throughout the IRP process, CIPCO has enhanced its in-house planning capabilities and continues to coordinate with and learn more about its members, their needs, the energy services delivery process, the wholesale power market, and risk management issues, products and tools. With the support of the integrated resource planning process, CIPCO is prepared to continue its endeavor to exceed its competitors in the areas of service excellence, product value and resource development. CIPCO's goal is to provide customer needs in a cost effective, reliable and environmentally responsible manner.

Section III

Follow-up submittal by CIPCO (5/7/07) in response to various comments by WAPA per its review of CIPCO's initial proposed Plan

May 7, 2007

Mr. Robert F. Riehl
Power Marketing Manager
Department of Energy
Western Area Power Administration
Upper Great Plains Region
2900 Fourth Avenue North
Billings, MT 59101-1266

Via UPS Next Day Air

Dear Mr. Riehl:

On April 9, 2007, our office received your March 30, 2007 letter and attachment addressing CIPCO's 5-Year Integrated Resource Plan. It was indicated that prior to approval of our plan, further clarification would need to be provided in several areas.

Your letter of March 30, 2007 requested that CIPCO provide "a plan" to address noted deficiencies. In regards to your request, rather than respond with "a plan", we have endeavored herein to fully address your concerns in a manner that we believe should enable WAPA to now complete its review and approval of CIPCO's IRP.

CIPCO's comprehensive responses to those areas in question are provided in the attached document. After your review, please advise if you have any additional questions or comments regarding our 5-Year IRP.

We appreciate you bringing these matters to our attention and providing us the opportunity to address your concerns. We look forward to receiving your notice approving CIPCO's 5-Year IRP.

Very truly yours,

CENTRAL IOWA POWER COOPERATIVE



Craig E. Fricke
Chief Operating Officer/Vice President of
Business Operations

lkc

Attachment

c: (w/attachment)

Mike Radecki, WAPA
Tracy Thorne, WAPA
Jerry Barker
Dave Duncan
Chad Herrick

WESTERN IRP CHECKLIST – CIPCO Responses

10 CFR Part 905 (Energy Planning and Management Program) requires that customers provide certain information in their Integrated Resource Plans (IRP).

In general, each customer must address its power resource needs in an IRP prepared and submitted to Western. 905.10(a). IRPs must consider electrical energy resource needs. 905.11(b). In order to satisfy the specific requirements of the regulation, Western must address the following 20 questions. If Western concludes that the customer has satisfactorily addressed the criteria in the regulation as evidenced by an affirmative response to these 20 questions, and that the IRP is otherwise reasonable, it should approve the IRP.

Does the IRP...

1. Evaluate the full range of alternatives for new energy resources? 905.11(a)

The plan provides a summary overview of new energy resources, including elements a-e below.

- a. New generating capacity?
- b. Power purchases?
- c. Energy conservation and efficiency?
- d. Cogeneration and district heating/cooling?
- e. Renewable energy?

2. Provide adequate and reliable service to the customer's electric consumers? 905.11(a)

The plan denotes an overall goal of providing reliable and economical services to its member consumers as well as addresses an overall objective of providing satisfactory service

3. Take into account the necessary features for system operation? 905.11(a)

Diversity and reliability are noted as specific objectives, however the plan does not clearly state how the supply-side and demand-side resources achieve these objectives.

- a. Diversity?

CIPCO Response:

CIPCO utilizes nuclear, coal, natural gas, oil, hydro and windpower in its supply mix. This diverse power supply meets about 90 to 95% of CIPCO's members' energy requirements, limiting exposure to purchased power price and liquidity

risks. CIPCO's menu of DSM programs is diverse and some programs have the ability to lead to load shedding in the residential, commercial and industrial sectors of its service area. CIPCO also participates in several jointly-owned baseload units (DAEC, LGS, CB-3, and CB-4). This arrangement contributes to diversity by spreading our ownership risk over more than one party and reduces the amount we must own in any one project.

b. Reliability?

CIPCO Response:

This commitment to diverse supply-side resources and targeted load shedding enables CIPCO to provide reliable, dispatchable power to all of its members. Diverse fuel sources (nuclear, coal, natural gas, oil, wind and hydro) reduce dependence on any one fuel type and source and any one mode of fuel delivery/transportation. Some reliance on purchased electric power contributes to diversifying our resource mix and therefore increases overall reliability. CIPCO is a member of the Midwest Reliability Organization (MRO) NERC region and is a participant in the Midwest Independent System Operator (MISO) market. The primary benefits of participation in these groups are reliability and economic stability.

c. Dispatchability?

CIPCO Response:

CIPCO's commitment to DSM programs and targeted load shedding allows for adequate dispatchability of CIPCO's diverse supply-side resources in order to provide the lowest cost power available to all of its members.

CIPCO has added some windpower, which is not dispatchable, to its mix. Biomass facilities under consideration would provide a renewable resource that is dispatchable. As we add new resources of any type, including DSM programs, we must keep in mind that some resources are more dispatchable than others. We will continue to maintain an appropriate amount of dispatchable resources that have the ability to follow load requirements.

d. Other risk factors?

CIPCO Response:

As mentioned above, utilizing the selected menu of DSM programs and power supply mix, CIPCO is managing its exposure to the purchased power market and therefore its economic and operational risks in this regard.

4. Take into account the ability to verify energy savings achieved through energy efficiency? The projected durability of such savings measured overtime?
905.11(a)

The report does not specifically state whether energy savings will be verified. It does however note the plan for continued evaluation of the cost and effectiveness of DSM programs.

CIPCO Response:

CIPCO will continue to accumulate data from incentive forms completed by program participants and store this information in an electronic database used for program evaluation. As in past years, some of the data that will be acquired includes equipment efficiency parameters, equipment capacities and information on the equipment and fuel types being replaced. This information is evaluated to provide inputs used in the actual energy and demand impact analysis that is performed on an annual basis. The average energy and demand impacts will be based on a composite average of actual and typical equipment performance variables, customer choices available without a program in place and likelihood that the customer would choose any one alternative.

5. Treat demand and supply resources on a consistent and integrated basis?
905.11(a)

The Planning Process Action Items section contained on page (8) provides inference that it maintains a robust supply, sales and demand response portfolio.

However, the report does not specifically address the integration of supply and demand resources on an integrated basis.

CIPCO Response:

(Integration) CIPCO computes avoided capacity and energy costs. These costs are used to evaluate and screen DSM programs in order to identify cost-effective demand-side options, measures and programs. It is through the use of these avoided costs that supply- and demand-side resources are treated on a consistent basis. In the load forecasting process, the impacts of cost-effective DSM programs are forecasted and included in projections of power requirements. In other words, CIPCO's forecasts of demands and system net requirements are adjusted to include the effects of DSM (conservation, peak clipping, etc.) programs. Through the use of avoided costs and the inclusion of DSM impacts in the load forecast, supply-side and demand-side resources are effectively integrated.

6. Identify and compare resource options? (An assessment and comparison of existing and future supply and demand-side resource options available to the customer based on its size, type, resource needs, geographic location, and competitive situation.) The options should relate to the customer's unique resource situation as determined by profile data (service area, rates, load growth, etc.). 905.11(b)(1)

The plan notes the intent to continually analyze the current resources and available options but does not contain the actual comparison of those options.

CIPCO Response:

Satisfied in original IRP as indicated through conversations with WAPA staff.

7. Clearly demonstrate that decisions were based on a reasonable analysis of the options? 905.1 1(b)(1)(iv)

The noted action plan items seem reasonable on its own merit

8. Include an action plan describing specific actions the customer will take to implement the IRP? The time period that the action plan covers? 905.11(b)(2)

Yes – 5-year plan.

9. Include an action plan summary consisting of:
a. Actions the customer expects to take in accomplishing the goals identified in the IRP?

Yes

b. Milestones to evaluate accomplishment of those actions during implementation?

Milestones are not stated

CIPCO Response:

Supply-Side Action Plan Milestones

1. "Continue to utilize the 20 MW of new and proposed additional municipal peaking capacity" CIPCO has already grown through the additional new peaking capacity in the months of July and August. Any additional peaking capacity will offset or delay the need for CIPCO to purchase summer peaking resources and delay the need to construct CIPCO-owned peaking resources. In the other ten months of the year, the 20 MW of new and proposed peaking capacity continues to offset and delay the need for peaking resources in those months.
2. "Continue participation in ... Council Bluffs Unit #4 (CB-4)." CB-4's expected commercial operation date is June 1, 2007.
3. "Continue scanning the region for opportunities to gain ownership shares of other newly planned generating units." This is a continuing process. CIPCO is monitoring the status of dozens of potential projects in the Midwest and has been in talks with several of them in recent years. CIPCO will have an approximate 100 MW need for additional baseload power by about the year 2015.
4. "Buy and/or sell capacity and energy, as needed, to supplement CIPCO's owned resource base in order to optimize our resource mix." Each fall, as CIPCO prepares its operating budget and as each long-term financial forecast is

prepared, CIPCO identifies the types and quantities of additional resources needed consistent with its integrated (supply- and demand-side) resource planning process.

5. "Continue to participate, through a power purchase agreement (PPA), in FPL Energy's 100 MW Hancock Wind Farm in Hancock County, Iowa." This PPA is automatically renewed each year unless either party gives adequate advance notice to terminate the agreement. It is CIPCO's intention to allow this agreement to be renewed throughout the contract term (through the end of 2025).
6. "Explore the feasibility of adding other renewable energy resources to the mix" As opportunities present themselves, CIPCO routinely enters into discussions with renewable resource developers.

Transmission System Milestones

- a. Regular and special substation maintenance includes 3-year cycle for relaying, 4-year cycle for Doble and 1-year for thermal scans.
- b. Pole ground-line treatment is on a 15-year inspection cycle.
- c. Major line maintenance is consistent with ground-line cycle.*
- d. Special line maintenance is done as required from various inspections.
- e. Switch maintenance and inspection is handled on a 3-year cycle.*
- f. Right-of-way clearing is conducted as required from the annual foot and 3-year helicopter reviews.
- g. Resistivity measurements of grounding connections are done at installation and in response to problems, as well as a 3-year cycle for switch location.
- h. Systematic efforts to rebuild older portions of the transmission system occur at approximately 4% per year (voltage levels of 34.5 and 69 kV).
- i. A focus on eliminating aging oil-filled breakers occurs at approximately 4 per year.

* where CIPCO staff operates facilities

CIPCO DSM Milestones

- Achieve net program demand savings by the end of 2008 or sooner. (See Table: Cumulative DSM Impacts – Annual Results). Note: The DSM programs provide for strategic energy growth that provides valley filling (both seasonal and daily) and improves system load factor. At the same time, these programs (especially heat pump programs) provide fossil fuel energy savings that are not accounted for in the IRP.
- Through public education and program promotion, CIPCO will strive to attain the cumulative participation and demand reductions provided in the original plan by reaching the annual milestones shown below. The values shown only represent impacts from program participants beginning in the year 2007.

Cumulative DSM Impacts – Annual Results						
	2007	2008	2009	2010	2011	TOTAL
Energy Impacts* (kWh)	10,481,811	21,425,031	33,084,414	45,221,908	57,923,749	168,136,913
Demand Impacts* (summer kW)	25	-49	-141	-271	-424	-424

c. Estimated energy and capacity benefits for each action planned?
905.11 (b)(2)(ii)(A-C)

Energy and capacity benefits are noted for the DSM Impact estimates

10. To the extent practicable, minimize adverse environmental effects of new resource acquisitions and document these efforts? 906.11(b)(3)

An overall goal of minimizing adverse effects is stated as well as the intent to use clean fuels and offset fossil fuel usage through renewable resource purchases.

12. Include a qualitative analysis of environmental effects in a summary format?
905.1 1(b)(3)

The plan contains a very limited qualitative summary which only addresses some of its resources (Council Bluffs I Fair Station I Wind purchase). It does not address other generation mentioned in the supply side action plan (Waste-heat, Biomass)

CIPCO Response:

In an attempt to mitigate CIPCO's environmental impact, numerous steps have been taken to control or lessen plant emissions. Council Bluffs Unit #4 is a supercritical coal unit with state-of-the-art emission control technology. It will burn low-sulfur Powder River Basin coal. Low sulfur Illinois coal has been added to the fuel mix at Fair Station. The continuing agreement for windpower from FPL's Hancock County Wind Farm provides emission-free power. The Summit Lake unit is being considered for an upgrade to put additional waste-heat to use. Council Bluffs #3, Louisa Generating Station, and Fair Station are all upgraded or scheduled to be upgraded to include low-NOx burners and scrubbers/baghouses to further reduce harmful emissions. Biomass is a renewable power source that CIPCO is actively considering as an addition to its supply mix. Biomass combustion is considered to be CO₂ neutral and, therefore, is not considered a major producer of greenhouse gas linked to climate change. Most bio-fuels have negligible sulfur content. CIPCO's energy efficiency programs reduce the need for electricity and, as a result, reduce the use of fossil fuels and the production of emissions and can be dispatchable which is a valuable attribute.

13. Provide ample opportunity for full public participation in preparing and developing the IRP? 905.11(b)(4)

The plan contains no documentation as to how public participation is accomplished with regards to the development of the IRP

CIPCO Response:

- CIPCO's statistically valid End-Use Survey is distributed to a sample (approximately 9,000) of the retail member-consumers served by CIPCO System cooperatives and evaluated every three years. Through this survey, retail consumers provide CIPCO with a wealth of information that is used to assist in development of programs and services. The End Use Survey provides broad-based public opinion into supply- and demand-side decisions. Consistent with our 3-year survey cycle, the next End Use Survey will be developed and mailed out to consumers in 2008.
- CIPCO hosts Member Service Meetings several times a year to share ideas and update cooperative member service personnel and key account representatives on the existing DSM activities CIPCO performs on their behalf. Cooperative personnel provide opinions and information, related to existing DSM program activities, acquired from their daily interaction with retail member-consumers in the field.
- During Member Service Meetings, cooperative personnel are encouraged to provide input on possible changes or additions to marketing and DSM programs based on their professional experience and feedback they routinely received directly from retail members-consumers.
- Proposed DSM program changes and additions are distributed to member service/key accounts staff and member co-op managers allowing for comment before any final decisions are made by CIPCO. Following this comment period, major program changes or additions that fall outside of the realm established by existing CIPCO Board approved policy are presented for approval to the Board.

14. Include a brief description of public involvement activities? 905.11(b)(4)

The plan states that consideration to public participation will be provided as new supply-side resources are planned but do not indicate how items a-d below will be accomplished.

- a. How the customer gathered information from the public?
- b. How public concerns were identified?
- c. How information was shared with the public?
- d. How public comments were responded to?

CIPCO Response:

CIPCO's involvement in supply-side resources for the years covered by this WAPA IRP Plan will be in power purchase agreements or jointly-owned power

plants/resources. The majority owner-operators/developers of these types of resources take the responsibility of engaging public response and addressing public concerns. Supply-side decisions are subject to public comment through member cooperatives, member co-op managers and CIPCO Board review and decision-making/approval processes.

15. Has each MBA member approved the IRP, confirming that all requirements have been met? 905.11(b)(4)(i)

The transmittal letter included a certificate indicating a quorum of the cooperative adopted the plan.

16. Has each MBA member (responsible official) signed the IRP? 905.11(b)(4)(i)

Yes – via certificate of board resolution.

17. Contain a statement that the customer conducted load forecasting? (See 905.11(b)(5) for data that should be included in load forecasting.)

Yes – the plan states a 20 year load forecast was developed

18. Contain a brief description of measurement strategies for identified options to determine whether the IRP's objectives are being met? 905.11(b)(6)

Yes – a series of screening tests are to be utilized.

19. Identify a baseline from which the customer will measure the benefits of IRP implementation? 905.11(b)(6)

Yes – the baseline is the current financial forecast

20. Specify the responsibilities and participation levels of individual members and the MBA? 905.12(b)(2)

No – individual participation levels are not stated

CIPCO Response:

- Individual members including Clarke Electric Cooperative, Inc., Consumers Energy, East-Central Iowa Rural Electric Cooperative, Eastern Iowa Light and Power Cooperative, Farmers Electric Cooperative, Inc., Guthrie County Rural Electric Cooperative Association, Linn County Rural Electric Cooperative, Maquoketa Valley Electric Cooperative, Midland Power Cooperative, Pella Cooperative Electric Association, South Iowa Municipal Electric Cooperative Association (SIMECA), Southwest Iowa Rural Electric Cooperative, and T.I.P.

Rural Electric Cooperative participate equally through their designated Board representative on the review and approval of the Plan.

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