

## **Exhibit 2**

# **ALABAMA POWER COMPANY**

**2013 INTEGRATED RESOURCE PLAN**

**PUBLIC SUMMARY REPORT**

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## **Executive Summary**

As identified in the 2010 IRP and continuing as key elements of the 2013 Integrated Resource Plan, the Company included the return of 1,220 MW of UPS capacity to the system in 2010, the continuing environmental de-rating of coal units between 2010 and 2017 (68 MW), the expiration of the Harris PPA in 2010 (627 MW), the extension of the Calhoun PPA through the end of 2022 (632 MW), and the procurement of renewable resources between 2011 and 2015 (25 MW). Also, the indicated need for new capacity as early as 2022 in the 2010 IRP has moved out to later years due to the impacts of the Great Recession on the load forecast. In the 2013 IRP, the Alabama Power Company fleet will continue to operate throughout the 20 year planning horizon. The additional generation capacity required to maintain an appropriate minimum planning reserve margin to meet customers' projected electrical demand throughout the remainder of the planning horizon will now be added beginning in 2030.

Since the IRP is a dynamic process by which the Company is continuously re-evaluating the optimal mix of supply-side and demand-side resources, subsequent IRPs may reflect changes in the scheduling and technology type for both supply-side and demand-side resource additions beyond 2013.

## **I. INTRODUCTION**

Alabama Power Company ("Alabama Power" or "Company") is an investor-owned electric utility, organized and existing under the laws of the State of Alabama. It is primarily engaged in generating, transmitting and distributing electricity to the public in a large section of the State of Alabama, and its retail rates and services are regulated by the Alabama Public Service Commission ("APSC").

The purpose of this document is to present Alabama Power's 2013 Integrated Resource Plan ("IRP") and to describe the process used in its development. The IRP is a schedule that, based on the best information reasonably available to the Company, reflects the optimal mix of supply-side and demand-side resources needed to meet the expected electrical requirements of its customers, consistent with its duties and obligations to the public as a regulated public utility. The process used by Alabama Power to develop the IRP comports with the provisions of the Public Utility Regulatory Policies Act of 1978, as amended, which contemplates the use of appropriate integrated resource planning by electric utilities.

The Company has approximately 1.4 million customers, of which approximately 86% (1.24 million) are residential; 13% (196,000) are commercial; and 0.5% (6000 industrial and 500 other) are industrial and other. Alabama Power has approximately 1.5 million transmission and distribution poles, and approximately 83,000 miles of wire. The Company is committed to providing cost-effective and reliable service to its customers. For the years 2010 – 2012, the Company had a service reliability of 99.97%. Alabama Power has a diverse fleet of generation resources which includes: hydro, natural gas, nuclear, coal, demand-side programs, combined heat and power, purchase power agreements and other resources.

The Company participates in a pooled operation of generating resources along with the other Operating Companies of the Southern electric system (Georgia Power, Gulf Power, Mississippi Power, and Southern Power). There are well-recognized advantages to be gained from operating in such a manner. In order to maximize these benefits, the planning of additional resource facilities is done on a coordinated basis. Although Alabama Power participates in this coordinated planning process, the Company remains the final decision-maker on any resource additions that it may require.

### **Cogeneration / Combined Heat and Power ("CHP")**

Throughout its history, Alabama Power has always focused on listening to and working with its customers in the development of its plans to reliably and cost-effectively meet the load obligations of all its customers under the state's regulatory rules and processes. For the Company's large commercial and industrial customers, these plans include efforts directed toward the management of rates and loads, and in some cases, the consideration of cogeneration/CHP

options. For such options to be viable, however, they must offer positive benefits, not only to the individual customer, but all customers in general. Alabama Power, its customers, and the APSC have successfully worked together to meet this objective.

Currently, the Alabama Power system includes approximately 1500 MW of customer-owned generation and more than 500 MW of Company owned CHP generation. The customer-owned generation has allowed Alabama Power to avoid the need and the associated costs of adding approximately 1700 MW of new generation. Cogeneration and CHP have been options for the Company for many years.

During the 1990's, when the Company needed to add new generation to reliably meet the load obligations of its customers, Alabama Power was able to develop new generation resources near certain customer facilities. These new generating facilities provided cost-effective capacity and energy to all of its customers while providing steam to the specific customers at the locations. More recently, the Company has used a program authorized by the APSC to certify two PPAs for rights to capacity and energy from two customer-owned CHP facilities.

The Company's success in identifying CHP projects that are expected to bring benefits to all customers in part is attributable to the recognition by the APSC that resource and capacity additions do not follow a one-size-fits-all approach. This is particularly so with CHPs, where a good working arrangement between all parties is essential for these projects to be developed, and where an adaptive regulatory process is critical to the project's success.

### **Environmental Matters**

Compliance costs related to federal and state environmental statutes and regulations could affect earnings if such costs cannot continue to be fully recovered in rates on a timely basis. Environmental compliance spending over the next several years may differ materially from the amounts estimated. The timing, specific requirements, and estimated costs could change as environmental statutes and regulations are adopted or modified. Further, higher costs that are recovered through regulated rates could contribute to reduced demand for electricity and impact the Company's forecast of customer loads.

The Company's operations are subject to extensive regulation by state and federal environmental agencies under a variety of statutes and regulations governing environmental media, including air, water, and land resources. Applicable statutes include the Clean Air Act; the Clean Water Act; the Comprehensive Environmental Response, Compensation, and Liability Act; the Resource Conservation and Recovery Act; the Toxic Substances Control Act; the Emergency Planning and Community Right-to-Know Act; the Endangered Species Act; and related federal and state regulations. Compliance with these environmental requirements involves significant capital and operating costs, a major portion of which is expected to be recovered through existing ratemaking provisions. Through 2012, the Company had invested approximately \$3.0 billion in environmental capital retrofit projects to comply with these requirements, with

annual totals of approximately \$62 million, \$34 million, and \$130 million for 2012, 2011, and 2010, respectively. The Company expects base level capital expenditures to comply with existing statutes and regulations, including capital expenditures and compliance costs associated with the EPA's final Mercury and Air Toxics Standards (MATS) rule, will total approximately \$1.0 billion from 2013 through 2015, with annual totals of approximately \$195 million, \$424 million, and \$411 million for 2013, 2014, and 2015, respectively.

Compliance with any new federal or state legislation or regulations relating to air quality, water, coal combustion byproducts, global climate change, or other environmental and health concerns could significantly affect the Company and its need for resource additions. Additionally, many of the Company's commercial and industrial customers may also be affected by existing and future environmental requirements, which for some may have the potential to ultimately affect their demand for electricity.

Compliance with the Clean Air Act and resulting regulations has been and will continue to be a significant focus for the Company. Since 1990, the Company has spent approximately \$2.7 billion in reducing and monitoring emissions pursuant to the Clean Air Act. Additional controls are currently planned or under consideration to further reduce air emissions, maintain compliance with existing regulations, and meet new requirements.

On February 16, 2012, the EPA published the final MATS rule, which imposes stringent emissions limits for acid gases, mercury, and particulate matter on coal- and oil-fired electric utility steam generating units. Compliance for existing sources is required by April 16, 2015, unless a one-year compliance extension is granted by the state or local air permitting agency.

The Company has developed and continuously updates a comprehensive environmental compliance strategy to assess compliance obligations associated with the existing and new environmental requirements discussed above. As part of this strategy, the Company has developed a compliance plan for the MATS rule which includes the construction of baghouses to provide an additional level of control on the emissions of mercury and particulates from certain generating units, the use of additives or other injection technology, and the use of existing or additional natural gas capability. Additionally, certain transmission system upgrades may be required.

In January 2013, the EPA released its revised RICE/NESHAP rules pertaining to customer-owned generation. These new rules impact customers who participate in Alabama Power's Stand-by Generator program. This program, which has been in service for 20 years, has allowed the Company to utilize these stand-by generators in times of critical peak operations. The limited use of these customer-owned generators has allowed the Company to avoid building its own resources, which has helped to avoid higher rates for all customers. Unfortunately, the new EPA rules have put significant restrictions on the customers' use of their generators. In response to these new rules, Alabama Power has worked with the APSC to revise the related Stand-by Generator tariff to give participating customers additional flexibility. The ongoing impact to this

program is not known at this time, but the Company expects a reduction in the growth of this demand-side option.

### **Integrated Resource Plan (IRP)**

In order to anticipate future energy requirements and electrical demands of the customers served by Alabama Power, a load forecast is developed which includes a 20-year projection of the expected growth in customer requirements. Alabama Power then develops an IRP that reflects, using the best information reasonably available to the Company, the optimal mix of supply-side and demand-side resources to meet this projected load growth in a cost effective manner that benefits the Company's customers and the state as a whole.

The IRP is updated on a triennial basis, although from time to time circumstances may prompt the development of an interim IRP. The IRP and its underlying details are reviewed with the APSC staff. This review keeps the APSC informed as to the Company's plans and helps to ensure that the process serves its ultimate goals of minimizing rates and providing the desired level of service reliability. These goals are important because they allow the Company to be competitive with other energy providers and promote economic development within the State of Alabama.

This report summarizes information and results on the Integrated Resource Planning process at Alabama Power. It includes a brief overview of the process and an executive summary of the results.

## **II. INTEGRATED RESOURCE PLAN SUMMARY**

### **II.A. Overview**

Alabama Power Company's integrated resource planning process is designed to meet the long-term projection of the expected growth of its customers' energy and demand requirements. The goal of the IRP is to have an effective plan and strategy in place that provide for reliable service that meets or exceeds legal requirements and accounts for risk at the lowest practical cost.

The IRP, which has a 20-year planning horizon, is a tool used by the Company to inform management when a reliability based resource addition appears to be needed and the indicated optimal mix of resources that meets the customers' future load requirements. Using the best information currently available at the time of its development, the IRP provides the basis for estimating potential capital expenditures that may be required for future generating capacity additions. In the IRP, both supply-side and demand-side options are evaluated and integrated on a consistent basis through the use of marginal cost analysis. This approach ensures that both supply-side and demand-side options are included in the IRP when it is economic to do so.

As shown in Figure 1, integrated resource planning is a dynamic process that continuously evaluates existing and potential resources in an effort to identify the best combination, in terms of reliability and expected total cost for serving customers. The principal components in the process are as follows:

#### ***Update Marginal Cost Projections Based on Latest IRP***

Marginal cost projections are derived using the previous IRP. These projections are then updated to recognize any significant changes in costs such as fuel, technology and regulatory compliance.

#### ***Load Forecast***

A forecast of future energy and demand requirements for the next 20 years is developed. This forecast incorporates the Company's best estimate of future economic conditions and trends in customer energy usage.

#### ***Marginal Cost Demand-Side Evaluations***

Demand-side options (DSOs) are evaluated on a marginal cost basis. This procedure establishes a set of cost-effective DSOs for inclusion in the IRP.



### ***Marginal Cost Supply-Side Evaluations***

Marginal cost evaluations are performed to determine if modifications to existing resources, new self-build resources and/or power purchases from other suppliers are economically viable.

### ***Resource Mix Analysis and Benchmark Evaluations***

This part of the IRP process involves the development of an optimum resource mix. The resource mix is a flexible, iterative analysis that allows for integration of the appropriate combination of resources that meet the projected load at the lowest expected total cost (both fixed and variable), while maintaining a minimum target reliability guideline. This step includes sensitivity analyses to establish boundaries within which the conclusions of a benchmark plan remain valid.

The resource mix analysis incorporates the impacts of existing and projected DSOs, revised load information, and updated cost information (including fuel, capital, operation and maintenance). It also incorporates the most recent information on the characteristics of existing resources, both supply-side and demand-side.

The flexibility of the IRP process allows insertion of marginal cost results from the supply-side or demand-side options in any sequence. The result is a benchmark plan from which the most cost-effective Integrated Resource Plan can be determined in an integration step.

In planning future resource additions, consideration is given to uncertainties associated with unforeseen unit outages, weather and load forecast deviations. In order to minimize the effects of these uncertainties, criteria are established that qualify and quantify an appropriate minimum level of capacity reserves. These reserves are planned to be available so as to account for the potential inability to meet load requirements due to generation shortfalls resulting from uncertainties associated with resource planning. The criteria are called reserve criteria and are specified as margins. The minimum long-term target reserve margin guideline, which is periodically reviewed and re-evaluated, is based on economic analyses, operating experience and system operation input, and seeks to minimize the combined cost of new generating capacity and the customers' cost of outages. The Operating Companies of the Southern electric system currently use a minimum long-term target planning reserve margin guideline of 15% for resource planning. The most recent target reliability reserve margin study was completed in 2012.

By virtue of load diversity across the Southern electric system, the minimum long-term 15% target reserve margin can be met if each Operating Company maintains a minimum long-term reserve margin of at least 13.5%. In other words, Alabama Power's participation in pooled operations enables it to maintain a lower reserve margin than would be required if it operated on a stand-alone basis. Thus, the Company has the same level of reliability to meet its customers' load requirements while avoiding the cost of building or purchasing additional generation resources. Maintaining the appropriate level of generation reserves minimizes the combined cost of new generating capacity, reliability energy purchases and the customers' cost of outages. These capacity savings represent one of the recognized benefits of operating as a pool.

### ***Integration***

Demand-side and supply-side options identified as cost-effective choices for resource additions, but not previously reflected in a benchmark plan, are incorporated into the IRP in the integration phase. This phase consists of determining the Company's best alternative for meeting the resource needs identified in the benchmark plan, coordinating resource additions with those of other system companies, and performing a financial assessment of the plan.

The process described above is not necessarily set forth in chronological order. Many evaluations are performed concurrently. Marginal cost evaluations can be performed or updated at several points in the process. Figure 2 describes a typical progression of the IRP process.

## **II.B. SUMMARY OF RESULTS**

This section presents a summary of the results of the 2013 integrated resource planning process, with the output being the 2013 Integrated Resource Plan. Key elements of the plan for the Company include the following:

- A significant change to the 2013 IRP is the delay of the next resource addition from 2022 to 2030. In the 2010 IRP, the Company showed a need for new peaking resources in 2022 and a need for intermediate resources in 2025. In the 2013 IRP, the peaking need is delayed until 2030 and the new intermediate resource need is beyond the planning horizon. There are no resource needs for baseload generating technologies in the scope of this 20 year planning study. These delays were in most part due to (1) the effects of the Great Recession on the economy in lower forecasted loads, (2) the return of the Miller UPS capacity in 2010 (1220 MW), and (3) the extension of the Calhoun purchase power agreement. The latter two items were identified in the 2010 IRP.

- The significant resource additions to the 2013 IRP from the 2010 IRP are (1) the certification of the AbiBow PPA (15 MW), (2) the certification of the Westervelt PPA (7.5 MW), (3) the certification of the Chisholm View PPA (202 MW), and (4) the certification of the Buffalo Dunes PPA (202 MW). The AbiBow PPA started on 6/1/2011 and ends on 6/30/2016. The Westervelt PPA started on 12/7/2011 and ends on 12/31/2021. The Chisholm View PPA started on 12/7/2012 and ends on 12/31/2032. The Buffalo Dunes PPA is scheduled to start on 1/1/2014 and end on 12/31/2033. The AbiBow PPA and Westervelt PPA involve capacity and energy from a biomass resource; the Chisholm View and Buffalo Dunes PPAs entitle the Company to up to 202 MW from each wind project. Under the PPAs, the Company has obtained the environmental attributes, including Renewable Energy Credits (RECs) associated with the energy. For these and other projects that provide Alabama Power with the right to RECs, Alabama Power Company retains the flexibility to retire RECs and serve its customers with renewable energy, or to sell RECs, either bundled with energy or separately, to third parties.
- As seen in the 2010 IRP, the 2013 IRP reflects certain unit de-ratings for environmental measures (scrubbers and SCRs). This causes the Company's coal fleet to be derated a total of 9 MW between 2013 and 2017.
- As seen in the 2010 IRP, the Plan had 25 MW of Renewable Resources identified, which was largely filled by the Westervelt and AbiBow PPAs as part of the Modified Block Process approved by the Commission. The 2013 IRP continues to incorporate a strategy to proactively pursue acquisition of economically viable renewable resources as a cost-effective hedge for environmental concerns, compliance and other customer-driven needs. The 2013 IRP has a total of 25 MW of unidentified renewable resources being added by 2017. Should any of these unidentified renewable resources develop into PPAs, the Company anticipates seeking the appropriate level of Commission approval.
- Other significant changes are the termination of the Harris PPA in 2010 (627 MW), and the Farley 1 and 2 nuclear unit uprates in 2011 (24 MW) and 2012 (24 MW).
- There were no other significant additions / decreases to the Alabama Power Company system expansion since the 2010 IRP.

Based on the Company's current load forecast and target minimum planning reserve margin guideline, additional resources will be needed to meet expected customer requirements beginning in 2030.

The remainder of this section will provide more details on the resource additions shown by the plan and the customer requirements that drive them.

### ***Load Forecast***

The Load Forecast is developed using complex models based on near-term and long-term economic indicators and expected electrical usage of the Company's customers. The historical and forecasted peak demands and growth rates are changing very little for the next 20 years. Accordingly, the expected average annual demand growth will continue to be very small.

### ***Reserve Margin***

At the present time, the Operating Companies of the Southern electric system have established a collective minimum long-term target planning reserve margin guideline of 15%. As noted above, peak load diversity enables the system to meet the 15% target reserve margin guideline if each Operating Company maintains a reserve margin of at least 13.5%. These planning reserves protect against a shortfall in capacity and a loss of load due to unforeseen future events, such as machine outages, greater than expected load growth or unusual weather. Maintaining an appropriate level of generation reserves also minimizes the combined cost of new generating capacity, reliability energy purchases and the customers' cost of outages.

Based on the current load forecast, the Company has sufficient resources to provide an appropriate level of reserves to meet customers' electrical needs through 2029. Given the projected reserve margin levels, the Company expects to be able to manage any capacity concerns associated with uncertainties surrounding environmental issues. Beginning in 2029, the Company's reserve margin is projected to fall below the diversified minimum target planning reserve margin (13.5%). The projected capacity deficit below target in 2029 is not large enough to result in a resource addition. By 2030, however, Alabama Power is projected to have a need to add new resources to maintain an appropriate minimum level of planning reserves.

In sum, the 2013 IRP indicates that, through 2029, the Company will have generation resources sufficient to maintain the minimum target planning reserve margin required to meet customers' electrical needs in a reliable and cost-effective manner.

### ***IRP Description***

The process that led to the development of the 2013 IRP included consideration of demand-side and supply-side options. Detailed analyses were performed on viable options to ensure that cost-effective resource options were chosen to meet projected load growth and satisfy the appropriate reliability criteria.

The resources identified for the 2013 IRP are summarized below:

### ***Demand-Side Options***

The 2013 IRP includes approximately 1640 MW of existing demand-side programs that have allowed the deferral of 1323 MW of supply-side resource capacity. The difference between the nominal values shown for the demand-side programs and the associated supply-side resource capacity deferrals is due to the lower availability of a demand-side option, as compared to a supply-side resource. The capacity deferral megawatts are directly controllable, in terms of ability to operate, by the Company (e.g., non-residential interruptible load) and are called "Active DSOs". The DSOs associated with customer energy use patterns (e.g., equipment SEER efficiency increases, insulation/infiltration upgrades) are called "Passive DSOs." The Passive DSOs serve to reduce expected peak load and consequently are embedded in the Company's load forecast. Existing passive DSO programs have resulted in a peak load reduction of 272 MW. Therefore, the total amount of existing DSOs in the IRP is 1640 MW plus 272 MW, for a total of 1912 MW.

### ***Purchased Power***

Purchase power contracts are evaluated along with supply-side and demand-side generating resource options to determine the most economic and reliable resource to meet our customers' energy needs. Short-term power purchases are used when appropriate to meet short-term capacity needs.

### ***Renewable Resources***

In the 2013 IRP, a small amount (25 MW) of additional Renewable Resources has been included as a resource expansion option. These resources have been placed in the plan as placeholders to address potential environmental concerns, compliance, and contingencies rather than reliability margins. As these resource options materialize, either through a Company RFP or by other means, a determination is made to their economic viability as compared to other options for Alabama ratepayers. The opportunity for 25 MW of Renewable Resources has been represented between years 2013 and 2017 in the 2013 IRP.

### ***Future Generation***

Long term purchase power contracts are evaluated and compared to other generation options so that the most cost-effective and reliable generation resources are selected to meet our customers' electrical needs. This process, for example, resulted in the selection of the Harris PPA and the Calhoun PPA for certification by the APSC. Alabama Power will continue to evaluate purchase

power options as a part of its IRP process, with the goal being to provide customers with reliable energy at the lowest practical cost.

Based on the current load forecast, increases in customer electrical demand through 2029 can be met with the Company's existing generation and demand-side resources. Beginning in 2030, the 2013 IRP indicates that additional generation capacity will be required to meet forecast increases in customer electrical demand throughout the remainder of the planning horizon.

Since the IRP is a dynamic process by which the Company is continually re-evaluating the optimal mix of supply-side and demand-side resources, subsequent IRPs may reflect changes in the scheduling and technology type for both supply-side and demand-side resource additions beyond 2013.

### ***Uncommitted Resource Options***

Assumptions for cost, performance, design maturity, regulatory approval, and other parameters for uncommitted resource options continue to change. The following list represents, but is not all-inclusive of, resource technology options that may be selected in the future.

#### **Peaking**

- Demand-Side Options
- Power Purchases
- Combustion Turbine
- Diesel Generator
- Photovoltaic
- Wind Turbine
- Advanced Battery
- Cogeneration / CHP
- Superconducting Magnetic Energy Storage

#### **Intermediate**

- Demand-Side Options
- Power Purchases
- Combined Cycle
- Cycling Coal
- Pumped Storage Hydro
- Cogeneration / CHP
- Repowering
- Compressed Air Energy Storage

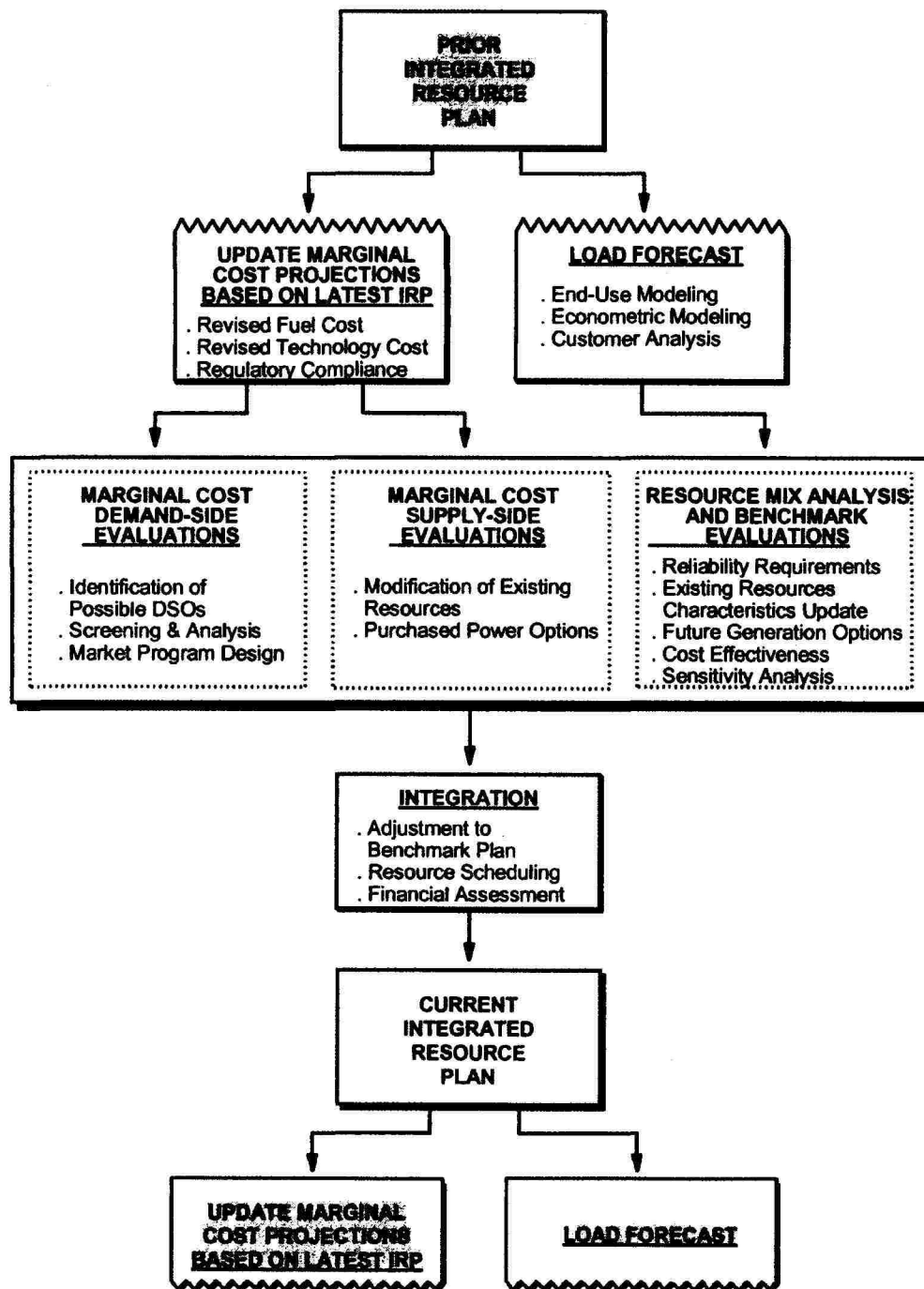
#### **Base**

- Demand-Side Options
- Power Purchases
- Nuclear
- Conventional Pulverized Coal – Super Critical and Ultra Super Critical
- Conventional Pulverized Coal – Super Critical and Ultra Super Critical w/CCS
- Integrated Gasification Combined Cycle
- Fuel Cells
- Landfill Gas
- Wood
- Cogeneration / CHP
- Repowering

### ***Conclusion***

Based on the load forecast used for this IRP, customers' electrical requirements through 2029 can be met reliably with the Company's existing generation and demand-side resources. With the exception of a small amount of renewable resources discussed above, no new generating resources are planned through 2029. The Company will have some existing coal capacity derated for environmental measures through 2017, but those derates should not trigger any near-term resource additions. Beginning in 2030, the IRP indicates that additional resources will be needed to meet projected customer electrical requirements for the remainder of the planning horizon.

**FIGURE 1**  
**ALABAMA POWER COMPANY**  
**INTEGRATED RESOURCE PLANNING PROCESS**





**FIGURE 2**

**TYPICAL PROGRESSION OF KEY ACTIVITIES  
RELATED TO THE DEVELOPMENT OF THE  
INTEGRATED RESOURCE PLAN**

**Marginal Cost Projection Update**  
**Preliminary System-Wide Fuel Price Workshop**  
**Supply-Side Technology Issues Reviewed**  
**Demand-Side Option Screening and Analysis**  
**Planning Issues Identified**  
**Preliminary Planning Assumptions Established**  
**Preliminary System-Wide Fuel Forecasts**  
**Technology Panel Review**  
**Candidate Unit Assumptions Established**  
**Load Forecast Finalized**  
**Demand-Side Option Forecast Finalized**  
**Planning Assumptions Reviewed and Finalized**  
**Resource Mix Analysis Process**  
**Preliminary IRP Review**  
**Benchmark Plan Completed**  
**Financial Assessment**  
**IRP Approval**