

May 1, 2020

VIA E-FILE & OVERNIGHT MAIL

Mr. Walter L. Thomas, Jr., Secretary
Alabama Public Service Commission
RSA Union Building
100 North Union Street, Suite 950
Montgomery, AL 36104

Re: Alabama Power Company Petition for Certificate of Convenience and Necessity;
Docket No. 32953

Dear Secretary Thomas:

Pursuant to the directions of the Chief Administrative Law Judge at the close of the March 9, 2020, hearing in the above-captioned matter, as such directions were amended by the *Procedural Ruling Granting Extension of Time to File Post Hearing Briefs in the Form of Proposed Orders*, dated April 14, 2020, Intervenor Alabama Solar Industry Association, Inc. hereby submits its post-hearing brief in the form of a proposed order.

These materials have been electronically filed today using the Public Service Commission's e-filing system. The original and one copy of this filing are being delivered to the Commission via overnight mail.

Thank you for your assistance.

Sincerely,



Jennifer L. Howard
Rimon, P.C.

BEFORE THE ALABAMA PUBLIC SERVICE COMMISSION

IN RE:)
)
ALABAMA POWER COMPANY)
PETITION FOR A CERTIFICATE)
OF CONVENIENCE AND)
NECESSITY)

Docket No. 32953

POST-HEARING BRIEF OF
ALABAMA SOLAR INDUSTRY ASSOCIATION
IN THE FORM OF A PROPOSED ORDER

[BY THE COMMISSION:]

These matters come before the Commission by virtue of a petition for a certificate of convenience and necessity filed by Alabama Power Company on September 6, 2019. As explained herein, the Petition is granted in part and denied in part.

I. INTRODUCTION AND PROCEDURAL BACKGROUND

On September 6, 2019, Alabama Power Company (the “**Company**”) filed with the Commission a petition (hereinafter, the “**Petition**”), along with supporting pre-filed testimony and exhibits, for a certificate of convenience and necessity for (i) the construction and installation of combined cycle generating capacity at the site of Petitioner’s Barry Steam Plant located in Mobile County, Alabama (hereinafter, the proposed “**Barry Plant**”); (ii) the acquisition of existing combined cycle generating capacity in Autauga County, Alabama (hereinafter, the “**Central Alabama Generating Station**”); (iii) the acquisition of rights and the assumption of payment obligations under a power purchase agreement for the output of combined cycle generating capacity operated in Mobile County, Alabama (hereinafter, the “**Hog Bayou Energy Center**”); and (iv) the acquisition of rights and the assumption of payment obligations under power purchase agreements for the output from five solar photovoltaic and battery energy storage systems (hereinafter collectively referenced as the “**Solar BESS Facilities**”), located in Calhoun, Chambers, Dallas, Houston and Talladega Counties; together

with all transmission arrangements, structures, substations, and facilities, environmental control measures, facilities or arrangements for the handling, treatment, transportation, delivery and processing of fuel, and any and all other appliances, appurtenances, facilities, rights, equipment, acquisitions, commitments and accounting authorizations necessary for or incident thereto. In addition, the Company sought authorization to pursue approximately 200 MW of demand-side management and distributed energy resource programs.

The Alabama Attorney General filed a Notice of Intervention in this matter on September 26, 2019. The following parties filed petitions to intervene: the Alabama Solar Industry Association, Inc. (“**Alabama Solar Industry Association**”); the Alabama Industrial Energy Consumers (“**AIEC**”); the American Senior Alliance; the Alabama Coal Association; Energy Farness.org; the Southern Renewable Energy Association (“**SREA**”); Manufacture Alabama; Sierra Club; Energy Alabama; and GASP. In a Ruling dated October 9, 2019, the Chief Administrative Law Judge granted the petitions to intervene by all of the above-referenced parties except SREA and set forth procedural deadlines for matters such as discovery and pre-filing witness testimony. On November 13, 2019, the Chief Administrative Law Judge denied SREA’s petition to intervene.

The Commission held a hearing in this matter from March 9, 2020, through March 11, 2020. At the hearing, the Company introduced the pre-filed testimony of the following witnesses, who were allowed to present a summary of their testimony and then were cross-examined: Jeffrey Weathers, Kevin Carden, Maria Burke, John Kelley, Michael Andrew Bush, Michael Brandon Looney, and Christine Baker.

The intervenors then introduced the pre-filed testimony of their witnesses, who were each allowed to present a summary of their testimony and then were made available for cross-

examination. George Clark testified on behalf of Manufacture Alabama. Maggie Clark testified on behalf of Alabama Solar Industry Association. Jeffry Pollock testified on behalf of the Alabama Industrial Energy Consumers. Rachel Wilson and Mark Detsky testified on behalf of Sierra Club. James Wilson, Karl Rabago, and John Howat testified on behalf of Energy Alabama and GASP.

At the conclusion of the hearing, the Chief Administrative Law Judge directed the parties to submit any post-hearing briefs, in the form of proposed orders, by April 17, 2020. By a *Procedural Ruling* dated April 14, 2020, the Chief Administrative Law Judge extended the deadline to file post-hearing briefs, in the form of proposed orders, until May 1, 2020.

II. LEGAL STANDARD

Alabama Code §37-4-28¹ governs this case, providing as follows:

No plant, property or facility for the production, transmission, delivery or furnishing of . . . electricity . . . shall be constructed, except ordinary extensions of existing systems in the usual course of business, until written application is first made to the commission for the issuance of a certificate of convenience and necessity, and the issuance by the commission of such certificate. Upon the filing of any such application, and after a public hearing of all parties interested, **the commission may, or may not, in its discretion, issue such a certificate of convenience and necessity, and if issued, may prescribe such conditions upon the issuance as it may deem advisable.**

(emphasis added).

The Company bears the burden of proof to show that customers need its proposed expansion and that the expansion is the least cost means of meeting this customer need.²

III. SUMMARY OF FINDINGS AND CONCLUSIONS

¹ See also *In re Ala. Power Co.*, 2000 WL 562303 (Ala. P.S.C. Apr. 10, 2000) (extending section 37-4-28 to power purchase agreements); *Ala. Power Co.*, 2017 WL 977522 (Ala. P.S.C. Mar. 9, 2017) (extending section 37-4-28 to power plant acquisition).

² Ala. Admin. Code §770-X-4-.15(5) (“Applicant, complainant or petitioner must, except as otherwise provided by law, establish the facts alleged by him as the basis for the relief sought, unless the party against which the complaint or petition is directed admits the same.”) See also Tr. 318:3 - 323:1.

The Commission grants the Company's petition in part, to the extent the Company seeks approval for the acquisition of rights and the assumption of payment obligations under the five Solar BESS Facilities, together with all related transmission arrangements, structures, substations, and facilities, environmental control measures, facilities or arrangements for the handling, treatment, transportation, delivery and processing of fuel, and any and all other appliances, appurtenances, facilities, rights, equipment, acquisitions, commitments and accounting authorizations necessary for or incident thereto.

The Commission further grants the Company authorization to pursue 200 MW of demand-side management ("**DSM**") and distributed energy resource ("**DER**") programs, provided that the Company meets the guidelines set forth in this Order.

The Commission denies the Company's petition with respect to its requests related to the proposed gas-burning facilities, specifically the proposed Barry Plant, the Central Alabama Generating Station, and Hog Bayou Energy Center, as the Commission finds that the Company has failed to carry its burden of proof with respect to such facilities.

Regardless of whether Alabama Power's capacity needs are as great as it claims, the proposed Solar BESS Facilities, as well as the use of solar projects as part of the proposed DSM and DER programs, have benefits to the grid and to the state's economy. These projects are also a reliable and cost-effective way to address any current shortfall in winter generating capacity, as well as the anticipated shortfall in summer generating capacity anticipated to occur in the near future.

The Commission's findings and conclusions are set forth in more detail below.

IV. DETAILED FINDINGS AND CONCLUSIONS³

³ References to portions of the transcript of the hearing in this matter shall appear as "Tr. [page]:[line] – [page]:[line]." References to exhibits introduced at the hearing are referenced by the introducing party's name,

A. Background

The Company claims that in order to ensure grid reliability, it needs to have a 25% capacity margin (the “**Target Margin**”) above its forecasted peak load, which amounts to a proposal for a new reliability standard that has not been previously used by this Commission.⁴ The Company seeks to reach this Target Margin by adding 1,896 MW of combined cycle, natural-gas-burning energy generation capacity to be provided by the proposed Barry Plant, Central Alabama Generating Station, and Hog Bayou Energy Center (collectively, the “**Gas-Burning Facilities**”), together with 400 MW of generating capacity to be provided by the proposed Solar BESS Facilities, and by pursuing 200 MW of demand-side management and distributed energy resource programs.⁵

The Company claims that it is now a winter-peaking utility, with peak demand in winter months in the hours near dawn and dusk.⁶ The Company also forecasts a shortfall between its anticipated summer demand and energy generation capacity, beginning in 2027.⁷

The Company is currently addressing the shortfall by relying on the Southern Pool, and the evidence does not demonstrate any compelling reason why the Company cannot continue to do so.⁸

B. Solar BESS Facilities

The five proposed Solar BESS Facilities are to be photovoltaic solar generation facilities,

exhibit number, and page reference, i.e. “Ala. Solar Ind. Assoc. Ex. [#] at p. [#].” References to a party’s pre-filed testimony or exhibits thereto are referenced by the witness name and, if applicable, identification of whether the testimony was direct or rebuttal testimony, the exhibit number if applicable, and a page reference, such as “Clark Test. 1:1 – 2:2.”

⁴ Tr. 319:16 – 322:7.

⁵ Petition at paragraphs 3- 7.

⁶ Tr. 108:16 – 112:9; Tr. 150:12 -150:15; Tr. 153:19 – 154:8; Tr. 441:14 - 442:5; Weathers Direct Test., Ex 1., pg. A-9.

⁷ Tr. 492:6 – 493:19.

⁸ Tr. 311:13 – 312:13; 365:21 -372:3; 590:13 – 591:5.

each equipped with two-hour battery energy storage systems.⁹

Of all the projects proposed in the Company's Petition, the Solar BESS Facilities are the most cost effective.¹⁰ Further, according to the Company's own analysis, the Solar BESS Facilities will provide a reduction in the energy cost for customers.¹¹ The evidence further demonstrates that the Solar BESS Facilities will save ratepayers money and offer value in terms of avoided costs and capacity benefits.¹²

Solar photovoltaic facilities, when paired with battery energy storage systems such as the facilities at issue, contribute to both summer and winter reliability needs.¹³ The battery storage systems store the energy that is generated during the day and then can discharge that energy at other times of the day when energy is needed.¹⁴

The technology to be used in the proposed Solar BESS Facilities is proven and reliable.¹⁵ There is no evidence in the record that such technology has any vulnerability to forced winter outages, and it is known to be less vulnerable to forced winter outage than gas-burning plants.¹⁶ In fact, winter temperatures increase the energy generation output of solar photovoltaic panels.¹⁷

The record reflects that solar energy also has other benefits to the grid. Adding solar energy can result in certain "avoided costs," meaning the avoidance of costs that the Company would otherwise incur to produce energy from some other energy generating facility.¹⁸ Solar projects can also result in deferred or avoided capacity investment; avoided transmission

⁹ Petition, p. 2; Kelley Direct Test. 20:17 – 21:3.

¹⁰ Tr. 504:15 – 504:23.

¹¹ Tr. 819:9 – 819:12.

¹² Detsky Direct Test. 12.

¹³ Tr. 150:19 -151:2; 152:23 – 152:5; 153:10 – 153:12; 783:13 – 783:21.

¹⁴ Tr. 154:17 – 154:22.

¹⁵ M. Clark Test. at 3:17 – 3:21 and 4:20 – 5:1.

¹⁶ Tr. 148:7 – 148:12; 150:6 – 150:10; 151:3 – 151:18; 506:11- 506:23.

¹⁷ Tr. 152:9 – 152:16.

¹⁸ Tr. 493:20 – 494:5.

investment; and avoided distribution line losses.¹⁹ The Company acknowledges that the benefits of solar can justify adding solar to the grid even in the absence of a specific capacity need.²⁰

The record also reflects a number of economic benefits of solar energy. The record -- including Company testimony -- reflects that customers and potential customers of the company want solar energy.²¹ The Company reported that a number of major private industrial companies in Alabama, as well as military bases, have specifically expressed an interest in obtaining more solar energy.²² Many of these companies have sustainability goals to lower their carbon footprint.²³ Nearly half of the nation's Fortune 500 companies have renewable mandates or goals of some kind, some of which have a goal of using 100% renewable energy.²⁴ The Company is aware that some companies determine where to locate new facilities based on access to solar or other renewable energy.²⁵ The evidence demonstrates that increasing the availability of solar energy has the potential to support Alabama's economy by attracting new companies to the state, new jobs, increased tax revenues, and modernized energy infrastructure.²⁶ In this way, adding solar the grid can lead to load growth that can put downward pressure on rates, and lead to load retention from avoiding the loss of existing customers who want access to renewable energy.²⁷ Finally, adding solar energy to the grid helps the Company comply with environmental air emissions laws, thereby reducing its compliance costs.²⁸

¹⁹ Tr. 494:22 – 495:16; Tr. 822:22 – 823:12.

²⁰ Tr. 494:10 – 494:16.

²¹ Tr. 498:23 – 499:13; 500:1 – 500:7; 517:13 – 518:16; Ala. Solar Ind. Assoc. Ex. 5 (M. Clark) at 5:10 -5:11.

²² *Id.*; Alabama Solar Industry Association Ex. 1, p. 21.

²³ Tr. 499:14 – 499:16; 500:8 – 500:14;

²⁴ Tr. 501:11 – 501:18; Alabama Solar Industry Association Ex. 1, p.2 - 26.

²⁵ Tr. 502:19 – 502:6; Alabama Solar Industry Association Ex. 1, p. 26 – 28.

²⁶ Tr. 502:11 – 503:11; Alabama Solar Industry Association Ex. 1, p.94; Tr. 504:1 – 504:9; M. Clark Test. at 4:3 – 4:19.

²⁷ Tr. 503:12 – 503:23; Alabama Solar Industry Association Ex. 1, p. 39 – 41.

²⁸ Tr. 504:10 – 504:14.

Further, solar energy generation is a cost-effective, reliable means of adding capacity without upward pressure on ratepayers.²⁹ In comparison to other southeastern states, Alabama is currently near the bottom of solar energy installations and expected solar installations over the next few years, and diversifying the Company's energy portfolio is in the best interest of ratepayers.³⁰ In other Southeastern states that have had strong solar installed capacity, regulators have approved such installations based on the economic benefits of solar.³¹ Adding solar energy to the Company's portfolio will help Alabama to reap the benefits that neighboring states are already seeing: downward pressure on rates, increased tax revenues, and increased competitiveness for new companies and new jobs.³²

Finally, the Solar BESS Projects satisfy all of the criteria of the 2015 Order of the Commission in Docket 32382, and the approval of these projects would be justified under that docket.³³

The anticipated benefits of these solar projects, together with the projects' cost-efficiency, and reliability in both summer and winter, have convinced the Commission that the Solar BESS Facilities should be approved. Regardless of whether the Company's winter capacity needs are as high as the petitioner claims, there is an upcoming summer capacity need, and solar provides benefits to the grid that would justify the addition of the Solar BESS Facilities even in the absence of a specific capacity need.

C. Gas-Burning Facilities

The proposed expansion related to the proposed Barry Plant and Central Alabama plant

²⁹ M. Clark Test. at 3:17 – 3:21 and 4:20 – 5:1.

³⁰ M. Clark Test. at 2:9 – 3:2.

³¹ M. Clark Test. at 2:21 - 3:20.

³² M. Clark Test. at 6:14- 6:17.

³³ Order of the Commission dated Sept. 16, 2015, Docket No. 32382. *See also* Tr. 356:17 – 356:20 (stating that the Company currently has only approximately 90 MW of solar energy assets in its system).

is anticipated to cost about \$1.1 billion in capital costs, not including the costs related to the Hog Bayou plant, nor the future costs for any of the plants related to fuel, maintenance, and other operating costs that would be incurred over the operating lifetime of the Gas-Burning Facilities.³⁴ The largest of the Gas-Burning Facilities – the proposed Barry Plant – is anticipated to have a 40-year life expectancy.³⁵ The Central Alabama Generating Station has a remaining life expectancy of 23 years, and the proposed power purchase agreement with the Hog Bayou Energy Center would have a proposed duration of 19 years.³⁶ These costs would be passed on to ratepayers over the lifetimes of the respective facilities and would increase rates.³⁷

The Company acknowledges that gas-burning facilities are subject to certain risks. First, the facilities are subject to the risk of gas prices rising.³⁸ Gas prices have historically been more volatile than the prices of other fuels.³⁹ The Company acknowledges the risk that increased gas prices could result from future limitations on fracking or new legislation or regulations enacted to address greenhouse gases.⁴⁰ The Company acknowledges that (i) such limitations could have a material impact on the supply and cost of gas, and (ii) costs associated with potential new greenhouse gas legislation, regulation, and emission reduction goals could be significant and result in increased prices charged to ratepayers.⁴¹ The Company acknowledges that it cannot guarantee that it would be able to procure gas for the proposed gas-burning facilities at low-to-moderate prices over the lifetime of the facilities.⁴²

Further, the Company acknowledges there is a risk of the gas-burning facilities having

³⁴ Tr. 382:13 – 383:10; 854:22 – 855:11.

³⁵ Petition at para. 3.

³⁶ Petition at para. 4 – 5.

³⁷ Tr. 851:14 – 872:4.

³⁸ Tr. 507:11 – 507:16.

³⁹ Tr. 507:6 – 507:9; Tr. 830:14 – 830:17.

⁴⁰ Tr. 511:17 – 511:20; Alabama Solar Industry Association Ex. 2, p. I-20.

⁴¹ Tr. 509:4 – 510:15; Tr. 511:10 – 511: 16; 511:17 – 512:4; Alabama Solar Industry Association Ex. 2, p. I-20 and I-24.

⁴² Tr. 514:2 – 514:10.

forced outages due to weather or fuel supply. Under extremely cold conditions, forced outages of gas-burning facilities can occur (and have occurred in the past) when plant equipment freezes.⁴³ The Company further stated in its federal filings that gas supply may be disrupted because of transportation delays, weather, labor relations, force majeure events, environmental regulations affecting its fuel suppliers, pipeline failure, or hurricane.⁴⁴

The Company either has not analyzed certain relevant risks or has not conducted adequate analysis. The Company did not perform any analysis of the cost of operating the proposed gas-burning facilities under a high gas price scenario.⁴⁵ The gas modeling that the Company did perform did not take into account certain known risks, such as the risk of future fracking limitations.⁴⁶ Nor did the Company analyze the possibility of a carbon tax higher than a starting point of \$20.⁴⁷ The Company offered no formal analysis or study concerning the likely frequency of pipeline failures or cold-weather-related interruptions in gas supply.⁴⁸ Similarly, the Company has not analyzed the potential cost of complying with potential new regulatory requirements that could apply to gas-burning plants.⁴⁹ Finally, the Company has not analyzed the risk of the gas-burning assets becoming stranded assets, despite the significant downward trend in the cost of solar projects (by 89% in the last 10 years for utility-sale solar facilities).⁵⁰

The Company also has not conducted adequate analysis to demonstrate that the proposed gas-burning facilities are a better option for ratepayers than additional solar-plus-battery-storage facilities or other options. The Company conducted no analysis of whether a combination of

⁴³ Tr. 148:7 – 148:12; 228:7 – 16.

⁴⁴ Tr. 512:5 – 512:15; Alabama Solar Industry Association Ex. 2, p. I-23 and I-24.

⁴⁵ Tr. 819:13 – 820:10.

⁴⁶ Tr. 828:18 – 830:10.

⁴⁷ Tr. 821:14 – 822:1.

⁴⁸ Tr. 155:22 – 157:23.

⁴⁹ Tr. 669:5 – 670:4.

⁵⁰ Tr. 670:17 – 673:6; Tr. 822:2 – 822:8; Tr. 831:8 – 832:3; M. Clark Test. at 5:1 – 5:7.

solar with battery storage projects and demand side measures such as distributed resources would be a lower cost option than the gas-fired generators.⁵¹ Similarly, the Company has not compared the cost of certain proposed solar projects that were rejected to the cost of the gas-burning facilities in the event of high gas prices.⁵² The Company did not compare the cost of proposed solar bids from the 2018 solar RFP to the cost of the gas-burning facilities in the event of high gas prices.⁵³ Nor did the Company perform any economic analysis comparing the cost of two-hour battery solar projects (other than the proposed Solar BESS Facilities) to the cost of other resources.⁵⁴ Finally, the Company has not analyzed the pricing of solar projects larger than 80 MW in capacity, leaving the company without data on the pricing economies of scale that can come from larger projects.⁵⁵

In sum, the Company has not satisfied its burden of showing that the expected benefits of the Gas-Burning Facilities would justify their significant expense and accompanying rate increases that would be a burden on ratepayers over the course of 40 years. Regardless of whether the Company's winter capacity needs are as high as it claims, the Company has not demonstrated that it has adequately analyzed which resources would best meet ratepayers' needs, nor that it has adequately studied the risks of the Gas-Burning Facilities or the magnitude of these risks.

D. Demand-Side Management and Distributed Energy Resource Programs

The Commission authorizes the Company to pursue DSM and DER programs, provided that the Company must first submit a detailed explanation of each such proposed program and obtain approval of each from the Commission on a program-by-program basis. However, to the

⁵¹ Tr. 822:9 – 822:13.

⁵² Tr. 505:1 – 505:21.

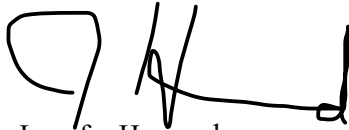
⁵³ Tr. 506:22 – 506:5.

⁵⁴ Tr. 828:12 – 828:17.

⁵⁵ Tr. 506:7 – 506:10.

extent that the Company intends to pursue solar distributed energy projects paired with batteries and located on or near customers' property,⁵⁶ as part of the DSM programs that the Company has requested, no further Commission approval of such projects is needed to the extent that such projects comply with all guidelines of Commission Docket no. 32382 other than the 500 MW limitation.

Respectfully submitted, this 1st day of May, 2020,

A handwritten signature in black ink, appearing to read 'J Howard', written over a horizontal line.

Jennifer Howard
Rimon, P.C.
2000 Southbridge Pkwy.
Suite 205
Birmingham, AL 35209
(205) 484-9398
jen.howard@rimonlaw.com

Counsel for Alabama Solar Industry Association, Inc.

⁵⁶ Tr. 514:16 – 515:10.

CERTIFICATE OF SERVICE

I hereby certify that on May 1, 2020, I served the foregoing document, via electronic mail, to the parties below:

Dan H. McCrary
Scott B. Grover
Balch & Bingham, LLP
P.O. Box 306
Birmingham, AL 35201-0306
dmccrary@balch.com
sgrover@balch.com

Robin G. Laurie
Riley W. Roby
Balch and Bingham LLP
105 Tallapoosa Street, Ste. 200
Montgomery, AL 36104
rlaurie@balch.com
rroby@balch.com

Conwell Hooper
Executive Director
American Senior Alliance
225 Peachtree Street NE
Suite 1430 South Tower
Atlanta, GA 30303
conwellhooper@gmail.com

Patrick V. Cagle
President
Alabama Coal Association
2 Office Park Circle, Suite 200
Birmingham, AL 35223
patrick@alcoal.com

Christina A. Tidwell
Keith Johnston
Kurt Ebersbach
Southern Environmental Law Center
2829 2nd Avenue South, Suite 282
Birmingham, AL 35205
ctidwell@selcal.org
kjohnston@selcal.org
kebersbach@selcga.org

George N. Clark
President
Manufacture Alabama
401 Adams Avenue, Suite 710
Montgomery, AL 36104
george@manufacturealabama.org

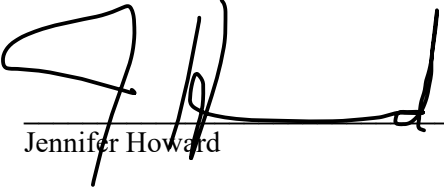
Diana Csank
Julie Kaplan
Sierra Club
50 F Street NW, 8th Floor
Washington, DC 20001
diana.csank@sierraclub.org
julie.kaplan@sierraclub.org

Joel E. Dillard
Dillard, McKnight, James & McElroy
2700 Highway 280
Suite 110 East
Birmingham, Alabama 35233
jdillard@baxleydillard.com

Paul Griffin
Executive Director
Energy Fairness
P.O. Box 70072
Montgomery, AL 36107
paul@energyfairness.org

Olivia Martin
Tina Hammonds
Zack Wilson
Assistant Attorney General
Office of The Attorney General
501 Washington Avenue
Montgomery, AL 36130
omartin@ago.state.al.us
thammonds@ago.state.al.us
zwilson@ago.state.al.us

C. Richard Hill, Jr.
Capell & Howard, P.C.
P.O. Box 2069
Montgomery, AL 36102-2069
crh@chlaw.com



Jennifer Howard