

Austin Energy Resource, Generation and Climate Protection Plan to 2030
(As Recommended for Action to Austin City Council by the EUC and RMC on March 09, 2020)

On August 12, 2019, the Electric Utility Commission (EUC) created the Resource Plan Working Group¹ (Working Group) to provide leadership and guidance to Austin Energy and the Austin City Council on technical and market issues to meet environmental, efficiency and affordability goals established by the Austin City Council.²

This Austin Energy Resource, Generation and Climate Protection Plan to 2030 (2030 Plan) outlines the Working Group's recommendations and strategic goals and represents an extensive effort of the Austin community working through the Working Group and Austin Energy staff. The 2030 Plan is based on analysis of the risks, costs and opportunities to meet future demand for electricity. The 2030 Plan is intended to be flexible and dynamic in order to respond to changing circumstances, including customer electric load, economic conditions, energy prices, and technological development, while strictly committing to firm carbon reductions.

The 2030 Plan updates and replaces the Generation and Climate Protection Plan to 2027.³ To the extent the provisions of this 2030 Plan are inconsistent with prior resource plans for Austin Energy or related City Council resolutions adopting such plans, this 2030 Plan will prevail upon its adoption by the City Council. The Working Group believes this 2030 Plan is groundbreaking in its approach and can serve as a model for others in achieving immediate, large-scale environmental benefits and reducing emissions, while maintaining affordable electricity rates.

Vision Statement

This 2030 Plan commits Austin Energy to continuing to provide affordable, dependable and safe electricity service to residents and businesses while pursuing the City of Austin's climate protection and sustainability goals⁴ and the directives set forth in the Austin Climate Emergency Resolution.⁵ As a part of its commitment, Austin Energy will maintain an energy supply portfolio sufficient to offset customer demand while eliminating carbon and other pollutant emissions from its electric generation facilities as rapidly as feasible within the limitations set by the Austin City Council. Austin Energy commits to providing access to the benefits of this 2030 Plan for limited-income communities and communities of color.

¹ The Working Group members are listed at the end of this 2030 Plan. The Resource Plan Working Group met ten times in late 2019 and early 2020.

² The Working Group Charter can be found at: <https://austinenergy.com/wcm/connect/2febfc53-8bad-4029-aabe-a9e5461fb516/EUCWG-Sep26-Agenda-Packet.pdf?MOD=AJPERES&CVID=mRKMujG> .

³ See: Austin City Council Resolution No. 20170817-061, <https://austinenergy.com/wcm/connect/6dd1c1c7-77e4-43e4-8789-838eb9f0790d/gen-res-climate-prot-plan-2027.pdf?MOD=AJPERES&CVID=mNO-55U>.

⁴ Austin Community Climate Plan, https://www.austintexas.gov/sites/default/files/files/Sustainability/FINAL_-_OOS_AustinClimatePlan_061015.pdf .

⁵ https://s29017.pcdn.co/wp-content/uploads/2019/08/document_A5987C4F-D3DF-27DD-3FFC54EBB0D1B0B.pdf . In August 2019, City Council passed Resolution No. 20190808-078 declaring a Climate Emergency and directing the City Manager to examine other objectives related to greenhouse gas emissions reduction (such as those set by the Austin Energy Resource Generation and Climate Plan) and identify the feasibility of accelerating the timelines of achieving such objectives.

Affordability

Affordability of electricity service for AE customers is an overarching goal of the 2030 Plan. Developments in the wholesale energy market in recent years have demonstrated that if Austin Energy carefully manages its portfolio it can achieve its environmental goals economically, efficiently and affordably. Austin Energy will do so with a commitment to the specific affordability metrics set by the Austin City Council.⁶

Generation Resource Objectives

As of March 2020, Austin Energy generates energy on an annualized basis equal to approximately 63% of its total customer load using carbon-free resources, 40% from renewable resources and 23% from the South Texas Project nuclear facility. As explained in more detail below, under this plan Austin Energy will eliminate its existing emissions through retirement of its carbon-emitting generation plants and will purchase additional, cost-effective, renewable energy resources.

-- No New Carbon Generating Assets

Austin Energy will no longer purchase, contract for or build long-term generation or storage resources that emit new carbon,⁷ nor any additional nuclear power generation resources.

-- Carbon Reduction Goals

86% of Austin Energy's electricity generation will be carbon-free by year-end 2025, 93% will be carbon-free by year-end 2030, and all generation resources will be carbon-free by 2035. Austin Energy commits to advance these goals more rapidly, if feasible given technological developments, affordability, and risks to Austin Energy customers.

-- Additional Renewable Generation Facilities

Austin Energy will utilize its annual RFP process to seek the best available renewable energy and electricity storage opportunities to add to Austin's generation resource portfolio as necessary to meet 2030 Plan goals and to assess market trends for future planning. With the exception of the Local Solar goals set out in this report, the 2030 Plan does not designate the components of Austin Energy's renewable energy portfolio. Austin Energy will plan for least-cost and least-risk acquisition of renewable resources and electricity storage as available in the energy market and as necessary to meet 2030 Plan goals.

⁶ Minutes of Austin City Council, February 17, 2011 at <http://www.austintexas.gov/edims/document.cfm?id=148844> . The affordability goal approved by City Council is composed of two metrics: a) control all-in (base, fuel, riders, etc.) rate increases to residential, commercial and industrial customer to 2% or less per year; and, b) maintain AE's current all-in competitive rates in the lower 50% of all Texas rates.

⁷ This will not apply to Austin Energy provisioning of emergency back-up generation for critical facilities.

Specific Actions to Achieve Generation Resource Objectives

-- Fayette Power Project

Austin Energy will maintain its current target to cease operation of Austin Energy's portion of the Fayette Power Project (FPP) coal plant by year-end 2022. Austin Energy will continue to recommend to the City Council the establishment of any cash reserves necessary to provide for that schedule.

-- Decker Creek Power Station

Austin Energy will maintain its current target to cease operations and begin retirement of existing Decker Steam gas-fired units, assuming ERCOT approval, with Steam Unit 1 ceasing operations after summer peak of 2020 and Steam Unit 2 ceasing operations after summer peak of 2021.

-- REACH for Carbon Free by 2035

Upon City Council approval of this 2030 Plan, Austin Energy will adopt a new market-based approach to accelerate reduction of carbon emissions by its legacy generators in the most economic manner available. This approach, known as *Reduce Emissions Affordably for Climate Health* ("REACH"), will incorporate a cost of carbon in the generation dispatch price, allowing Austin Energy to reduce generation output during low-margin periods but keep the resources available for high-margin periods. Austin Energy will apply an annual amount of approximately 2% of the prior year's PSA to implement REACH. Austin Energy will continue to adhere to the City Council affordability metrics through active portfolio management. The REACH plan is expected to reduce the utility's carbon emissions by 30% or approximately 4 million metric tons between approval of this 2030 Plan and Austin Energy's exit from FPP. Thereafter, the REACH plan is expected to reduce carbon emissions by 8% each year, while maintaining the flexibility to protect our customers' rates in periods of high prices in the wholesale market, until achieving zero carbon emissions by 2035.⁸ Austin Energy will report semi-annually to the Electric Utility Commission and the City Council the realized reduction in carbon emissions from the REACH plan's implementation.

-- Local Solar Resources

In addition to the large-scale energy resources discussed above, Austin Energy will:

Achieve a total of 375 MW of local solar capacity by the end of 2030, of which 200 MW will be customer-sited (when including both in-front-of-meter and behind-the-meter installations).

⁸ A graphic illustration of the REACH expectations is attached hereto as Exhibit A.

Continue a shared solar pilot program for multi-family housing and upon development of an automated electronic billing system, allow for expansion of this program.

Provide moderate and limited-income customers preferential access to community solar programs.

-- Energy Efficiency and Demand Response

In addition to the generation resources described above, Austin Energy will sponsor energy efficiency and demand response initiatives aimed to reduce overall system load and reduce peak demand as follows:

Achieve energy efficiency savings equal to at least 1% per annum of retail sales, targeting a total of at least 1,200 MW of demand side management (energy efficiency and demand response) capacity by 2030, including a target of 225 MW of economic peak demand response capacity by 2030.

Target serving at least 25,000 residential and business customer participants per year for all CES programs (Energy Efficiency, Austin Energy Green Building, Demand Response and Solar) with at least 25% of those customers being limited-income customers.

Commit to achieving 30 MW of local thermal storage by 2027 and 40 MW of local thermal storage by 2030.

Allow near real-time access to hourly energy use data for Austin Energy customers via the automated meter infrastructure, including compatibility with Green Button products and services.

Continue to move forward on energy code and green building development, including assessing the 2021 International Energy Conservation Code, and specific solar-ready, EV-ready, electric building-ready and net-zero requirements for commercial and residential construction for possible adoption in future codes.

-- Equitable Participation in Programs

Austin Energy will contract with a qualified third-party service provider to design and implement, with the co-operation of the Austin Equity Office, the convening of community meetings comprised of those living in, or serving those in limited-income communities and communities of color, and others who cannot afford or access current programs. These community meetings should identify barriers and recommend approaches, goals and outcomes to achieve more equitable energy efficiency, demand response and solar programs that reach customers currently

underserved by existing programs because of income limitations and/or other barriers (renting, language barriers, etc).

This process is intended to craft recommendations for programs to best meet community needs and should also consider the best methods for coordinated delivery and implementation of energy program offerings with other available programs of the City, such as home repair and affordable housing, when serving limited-income communities. It is the task of Austin Energy to translate these community recommendations into affordable, successful programs.

The meetings should focus on those not currently engaged and should aim to include nonprofit home repair program contractors (Austin Housing Repair Coalition), Climate Plan Climate Ambassadors, and direct service organizations such as Family Eldercare, Caritas, Foundation Communities, Ladies of Charity and the Austin Tenant's Council. Meetings should be held in the community, accessible, near public transportation, accommodate work schedules and provide for children who may be in attendance. The community meetings should not seek input from anyone with a vested interest in the outcome of the plan, such as issue advocates, trade groups and vendors.

A final report should be provided no later than one year after the retention of the service provider. The report should be made to EUC, RMC and City Council and those bodies should hold Austin Energy accountable for implementing programs that address the recommendations of the meetings. Thereafter the EUC will annually review Austin Energy's progress in achieving these goals.

-- Electric Transportation

Austin Energy will pursue the Climate Protection Plan Goals and Austin Mobility Plan and expansion of Austin Energy revenue base by:

Supporting private-public partnerships that promote, market, and provide electric vehicle support to assist in the transition to electric transportation.

Support the City of Austin Fleet Services' electrification plan.

Evaluate equitable growth of public and private charging station deployments by offering rebates, operational support, outreach, and special public charging rates that includes support for limited-income populations.

-- Transmission Study

Commencing in 2020, Austin Energy will conduct a transmission study to assess the costs, benefits, technical and asset requirements of upgrading transmission resources to allow for the retirement of Austin Energy's existing natural gas generators as early as 2027, 2030 or as per the schedule set forth in this 2030 Plan. Austin Energy will also consider the viability of large-scale

energy storage units and local solar installations within the Austin Energy load-zone to mitigate transmission requirements and exposure to peak electric market risks. Austin Energy will report its findings to the EUC and City Council.

Recommendations for Further Study

Austin Energy will seek new opportunities by engaging in the following further research:

Study the technical and economic feasibility of investing in emerging technologies, including dispatchable renewable energy, distribution-level energy storage, transmission-level storage as a non-wire alternative to transmission facilities, aggregated demand response, and Vehicle-to-Grid.

Continue to study the costs, benefits, risks and potential rate impacts of achieving 100 -200 MW of electric storage.

Assess opportunities to accelerate Plug-In Electric Vehicle (PEV)-based demand-response capabilities, including limitation of the Electric Vehicle Supply Equipment (EVSE) rebate program to smart devices that have Wi-Fi or other acceptable communication capabilities, to encourage the deployment of equipment that enables peak shaving for PEV's.

Upon completion of its automated meter infrastructure rollout, Austin Energy will assess how to monitor the demand response achieved by smaller consumers and reward responsive consumers.

Explore how to utilize new technologies, including energy storage systems and connected appliances, to increase the amount of Demand Response that can be used to control peak demand.

Continue active participation in the development and deployment of smart-grid technologies, and continue with an active and leadership role in the Pecan Street Project and other partnerships.

Take the lead with other city departments, especially Austin Water, to maximize DSM and load shifting opportunities within City of Austin operations.

Austin Energy will continue to support utility industry organizations working to develop best practices to prevent methane and hydrocarbon leaks in natural gas fields and in pipelines.

Future Process

Austin Energy will conduct an update of this 2030 Plan in advance of its cost-of-service study in approximately five years from adoption of the 2030 Plan, or sooner if significant changes in technology or market conditions warrant. At the end of 2022 the EUC will decide whether there have been sufficient changes in circumstances that an interim update would be beneficial.

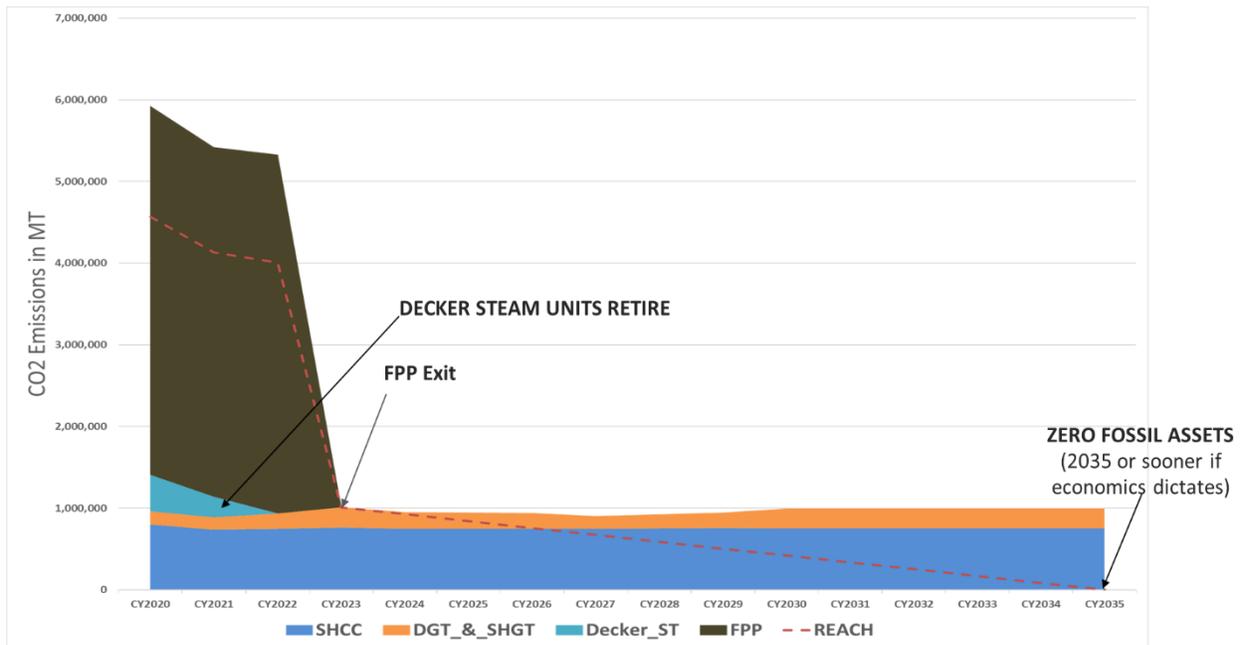
Austin Energy will provide an update every two years to the EUC, RMC and City Council reporting progress towards reaching established goals. a

Austin Energy will work to ensure that future resource planning advisory or stakeholder groups include broad based customer representation, including representatives of residential and limited-income customer advocacy organizations and communities of color.

This 2030 Plan Was Unanimously Approved by the Members of the Austin Energy Generation Resource Working Group on March 5, 2020:

Cary Ferchill (Chair), Bob Batlan, Al Braden, Janee Briesemeister, Todd Davey, Leo Dielmann, Karen Hadden, Marty Hopkins, Ed Latson, Cyrus Reed, Ruby Roa, Luis Rodriguez, Kaiba White

Austin Energy Generation Emissions Projections*



Austin Energy Generation Emissions Projections in Metric Tonnes (MT)																
	CY2020	CY2021	CY2022	CY2023	CY2024	CY2025	CY2026	CY2027	CY2028	CY2029	CY2030	CY2031	CY2032	CY2033	CY2034	CY2035
Current Goals	5,928,016	5,419,359	5,328,741	1,011,916	952,147	945,250	940,819	905,102	923,256	946,587	994,288	994,288	994,288	994,288	994,288	994,288
REACH	4,570,050	4,133,072	4,008,219	1,011,274	927,001	842,729	758,456	674,183	589,910	505,637	421,364	337,091	252,819	168,546	84,273	0

*These are projections as of March 2020 and actual results for a given period may differ depending upon market conditions.