FARMERS BRANCH

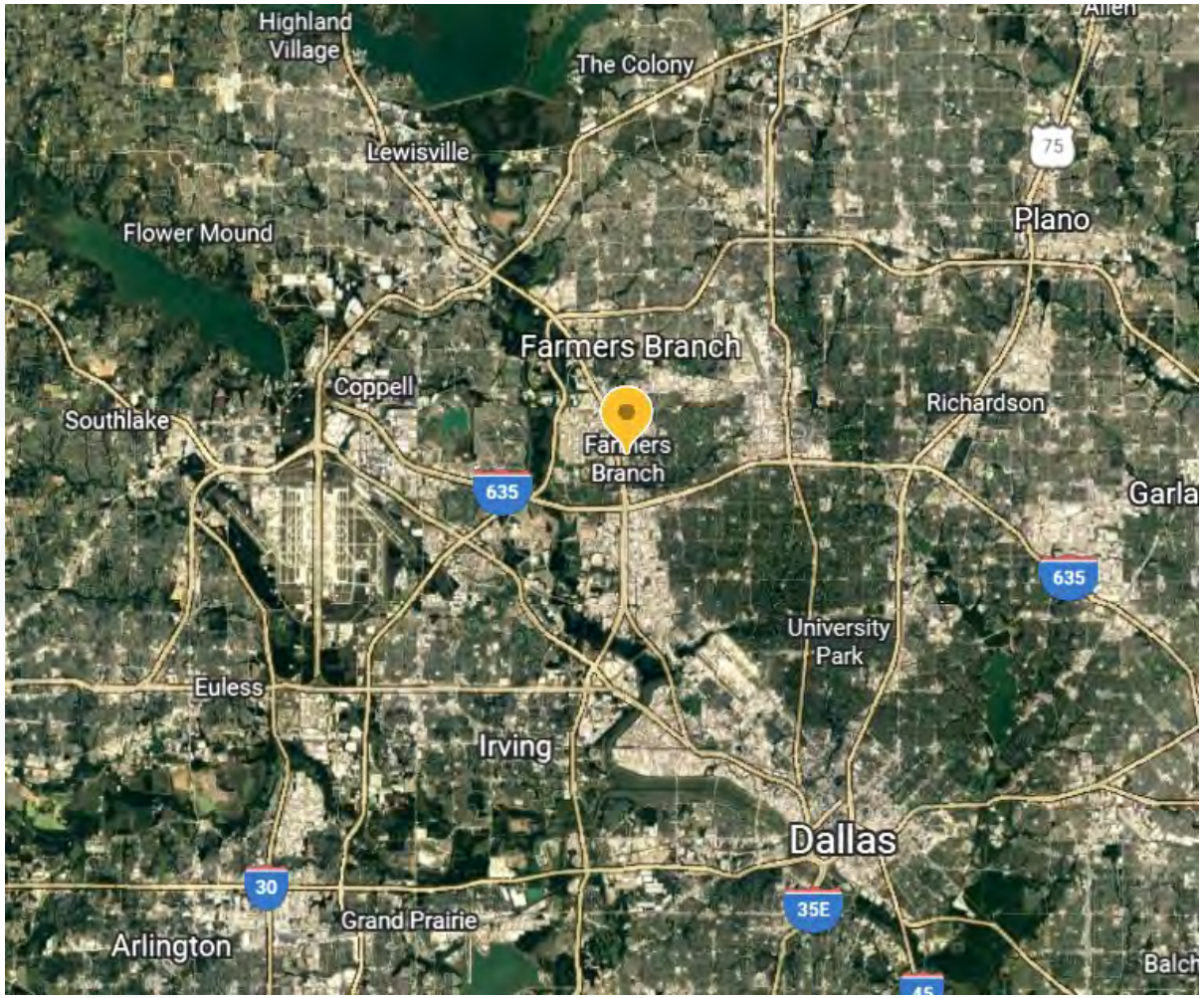
Farmers Branch Sustainability Overview

RCE Summit

November 10, 2022

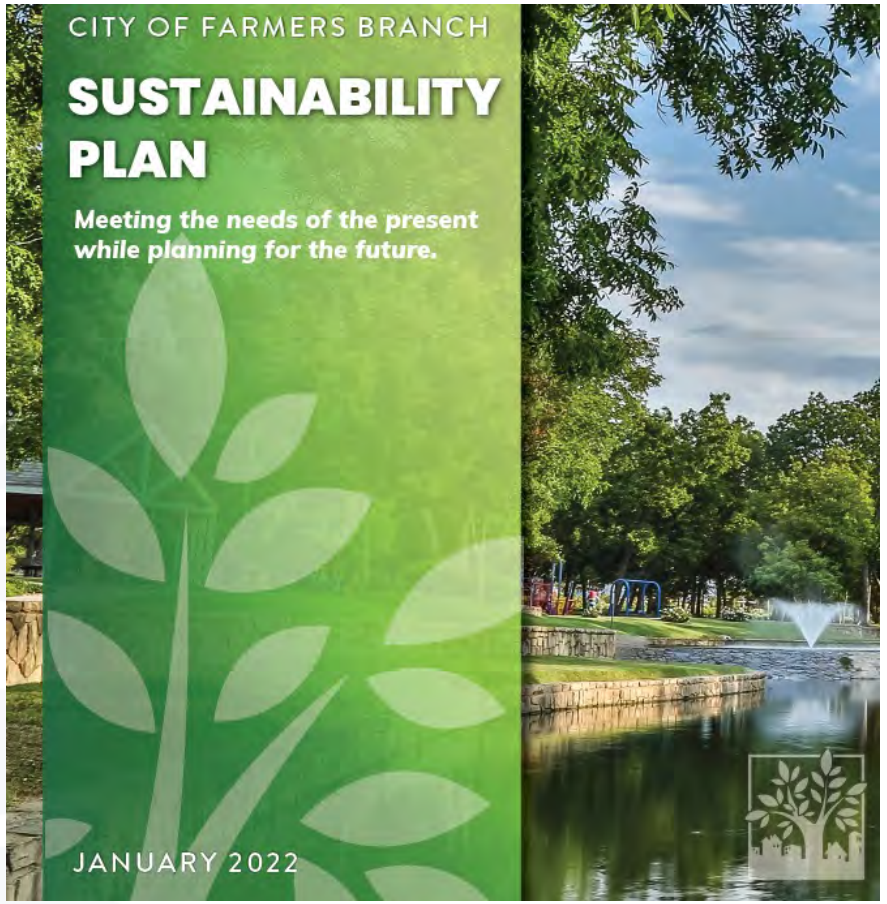
Farmers Branch Facts

- Population: 35,991
  - (2020 Census)
- Approximately 12 square miles
- Located in Dallas County



Sustainability Plan

- Adopted in February 2022
- Sustainability to-do list (next 3-5 years)
- Concise and foundational in nature
- Provides goals, recommended actions, and metrics to measure progress
- City actions to propel community progress
  - Leadership by example



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Focus Areas

Built Environment

Transportation

Natural Resources

Zero Waste

Economic Wellness and Resilience

Community Vitality

Focus Area → Goals → Recommended Actions → Progress Metrics

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Maximizing Benefits

Increased Energy Efficiency

Environmental Benefits	Economic Benefits	Social Benefits
Less electricity or natural gas used Improved air quality and reduced emissions	Lower energy bills Increased home marketability	Reduced utility burden for lower income households Improved thermal comfort

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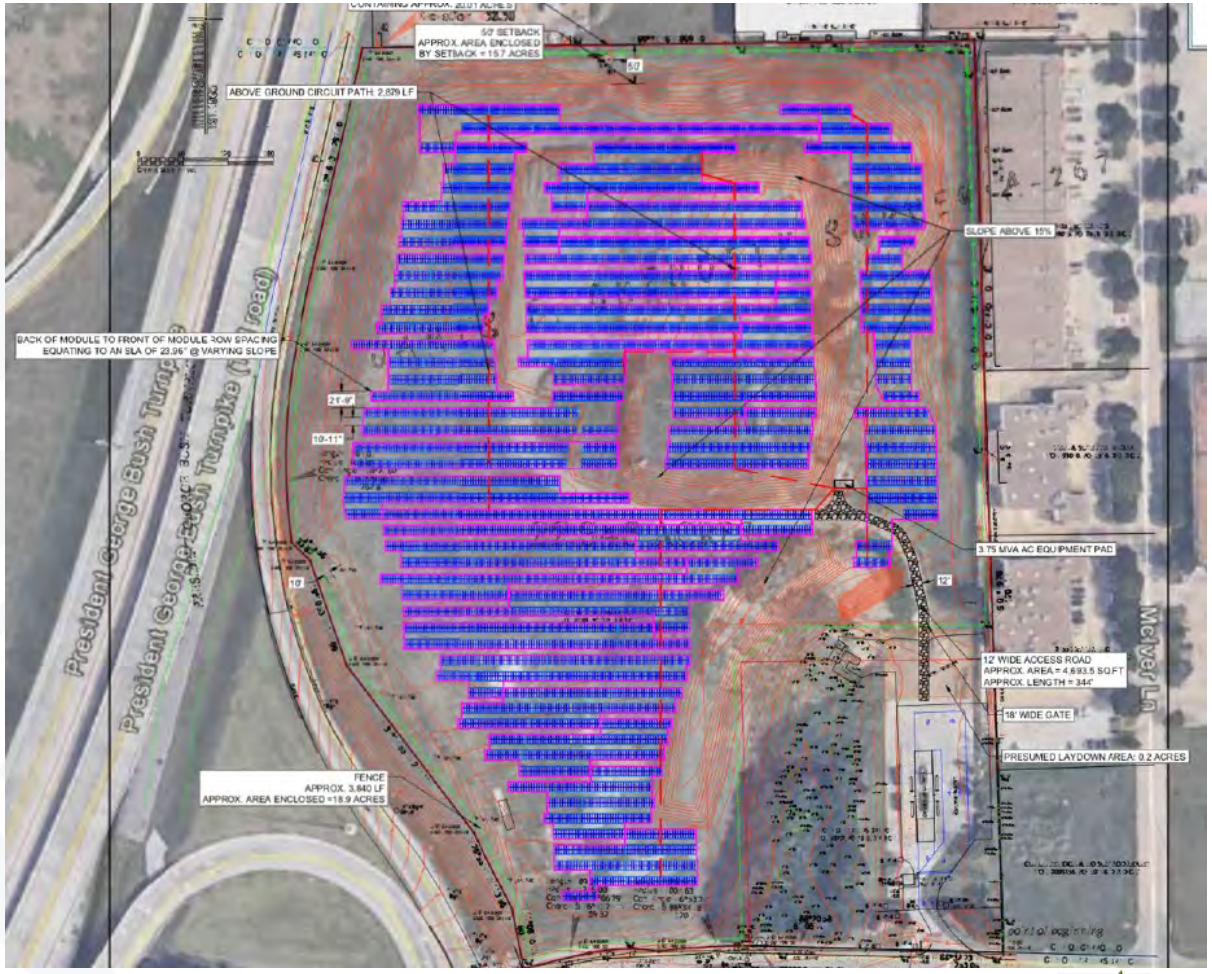
Increasing Renewable Energy – Landfill Solar

- Closed landfill located at Valley View and PGBT
  - Closed in 1987
  - Limited future uses for site without remediation
- Approximately 20-acre site
- Identified as potential solar site in 2020 Solar Feasibility Study
- RFP released late 2021



Project Info

- BQ Energy Development: Power Purchase Agreement
  - Fixed cost, 0% energy price escalator
  - 20 year pricing
  - 7.25 MW DC
  - Estimated annual production 13,632,000 kWh
- Turn-key project
  - Developer is responsible for permitting, design, equipment purchase, installation, operation, maintenance, and decommissioning
  - No upfront cost to City
- City to enter long-term power purchase agreement
  - City will purchase power generated from site
  - Contract provides stable electricity pricing for 20 years

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Landfill Solar Sustainability

- Sustainability Plan alignment
  - Goal: Increased renewable energy
  - Recommended action: Pursue a 100% renewable electricity contract for City operations
- Sourcing electricity from solar would provide a significant reduction in the City's carbon emissions and air pollution associated with power production
  - 5,179 MTCO2e (Equivalent to 5.7 million pounds of coal burned)
- Other benefits
  - Price stability, expansion of clean energy markets, local construction and energy jobs, and some grid resilience

Increasing Renewable Energy – Onsite Solar

- Solar installed on three City facilities in Spring 2021
  - Fire Station #2, Manske Library, and Rec Center
- Solar installed on Natatorium (Sept. 2022)
- Total cost of all installations: $1,286,000
- Received Oncor incentive payment on first three sites
- Payback time: Approx. 10 years

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Increasing Renewable Energy – Residential Electricity

- Farmers Branch has contracted with iChoosr since May 2018 to facilitate the Power Switch program

- iChoosr conducts reverse auctions to provide residents with options for lower priced contracts
  - 10,000+ residents have participated
  - 1,828 residents accepted an offer
  - Estimated collective savings $933,841

- All contracts are 100% renewable starting in late 2020.

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POWER SWITCH

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Increasing Renewable Energy – Residential Solar

- Similar model to Power Switch program
  - Solar panel installation instead of an electricity contract
- Simplifies the process for purchasing and installing solar
- Provides a financing option for residents
- Group purchase can save money for homeowners
  - Economies of scale or “buying in bulk”
- No cost to City

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SOLAR SWITCH

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How Solar Switch Works

1. Interested residents sign up
   - First auction had 260 residents have signed up
2. iChoosr hosts a reverse auction with installers to get the lowest bid
   - Suppliers/Installers must meet eligibility requirements to ensure quality
   - Estimated savings of $3,800 through program
3. Interested residents receive a personalized offer with cost breakdown.
4. Residents can accept the offer and move forward with the roof survey, permitting, and installation process
   - No penalty for those who do not wish to move forward
   - 53 residents put down deposit
   - 14 residents are already moving forward with installs

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Future Work

- Water Rebate Pilot
- Tree Giveaway Pilot
- Greenhouse Gas Inventory
- Planning for solar and electric vehicles
- Landfill diversion
- Community outreach
- Light pollution
- Environmental Purchasing Policy

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Questions

Supplemental Slides

Capacity and Production Data

- Installation Capacity
  - Rec Center: 270 kW DC
  - Manske Library: 190.06 kW DC
  - Fire Station #2: 73.96 kW DC
  - Natatorium: 105.6 kW DC

- As of October 1, 2022
  - 1,015,679 kWh produced
  - $106,177 avoided cost of electricity
  - 720 $MTCO_2e$ avoided
    - Equivalent to 796,000+ pounds of coal burned

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