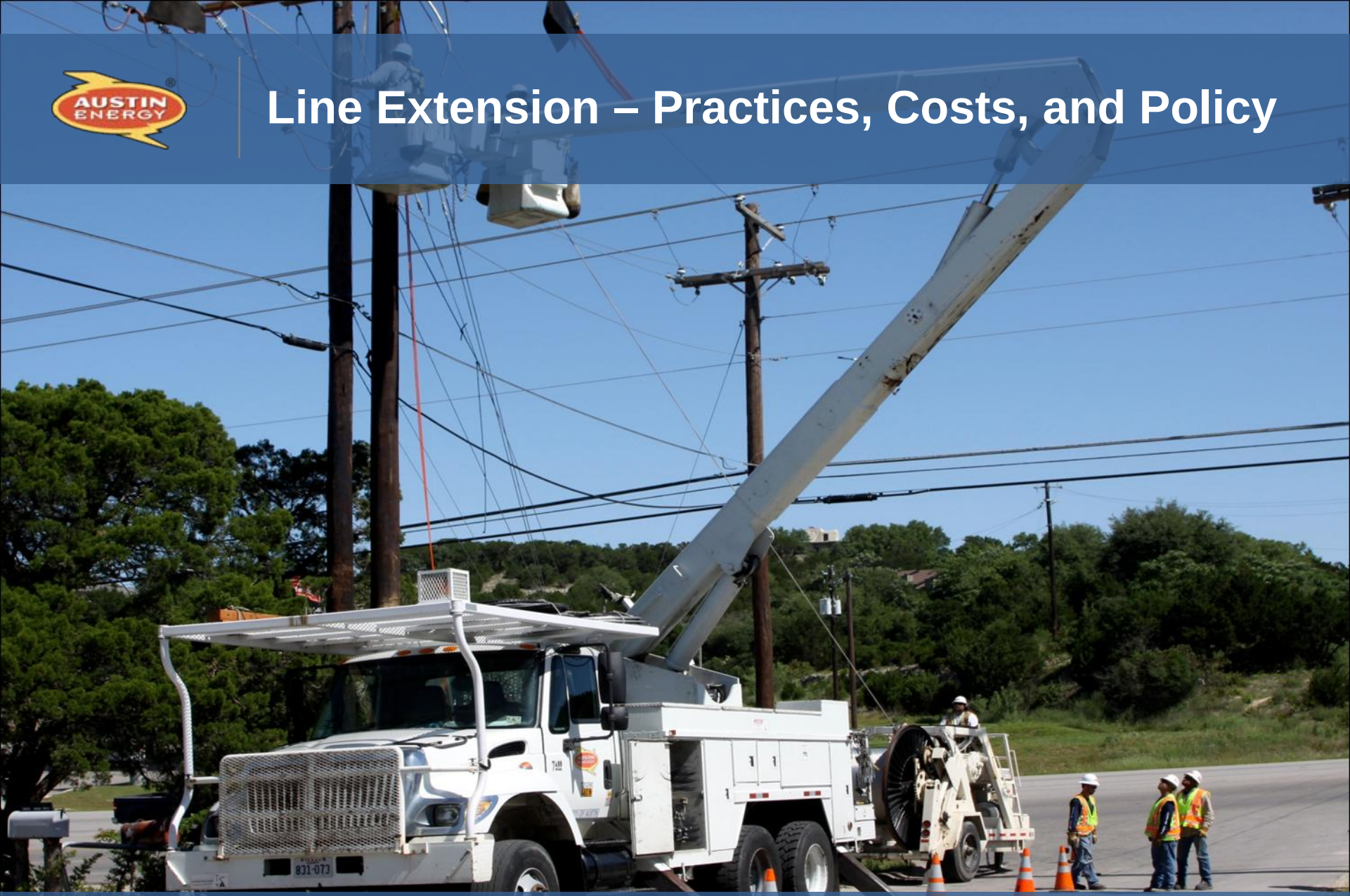
Line Extension – Practices, Costs, and Policy



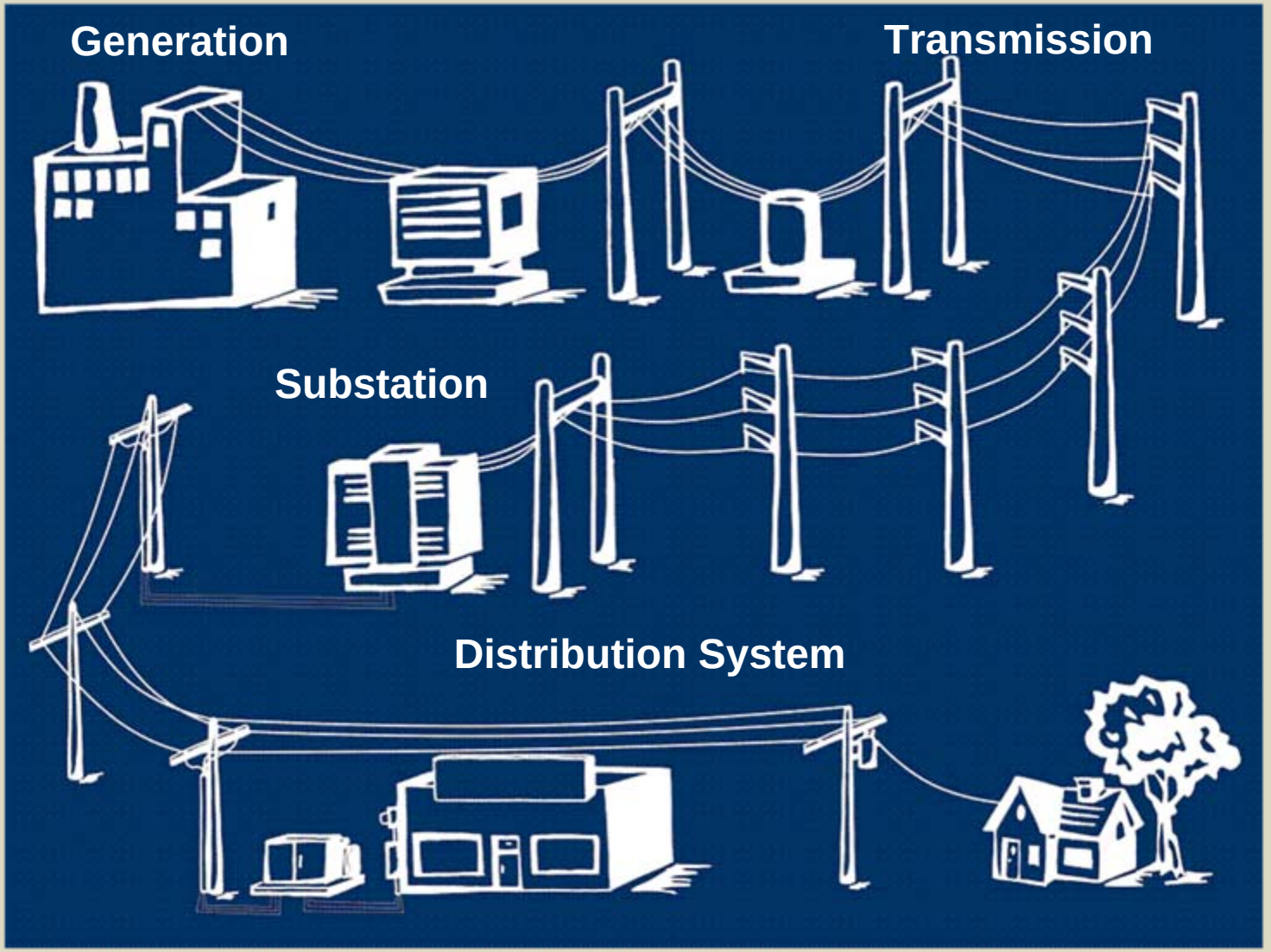
Larry Weis, Austin Energy General Manager
Austin City Council Committee – AE
August 13, 2013

Mission: Deliver clean, affordable, reliable energy and excellent customer service.

Agenda

- Understanding the AE distribution system
- Annual CIP spending
- Line extension policies and practices
- Other utilities, Contribution in Aid of Construction, and regulatory policies
- Control electric rates
- Recommendations and potential impacts of policy changes

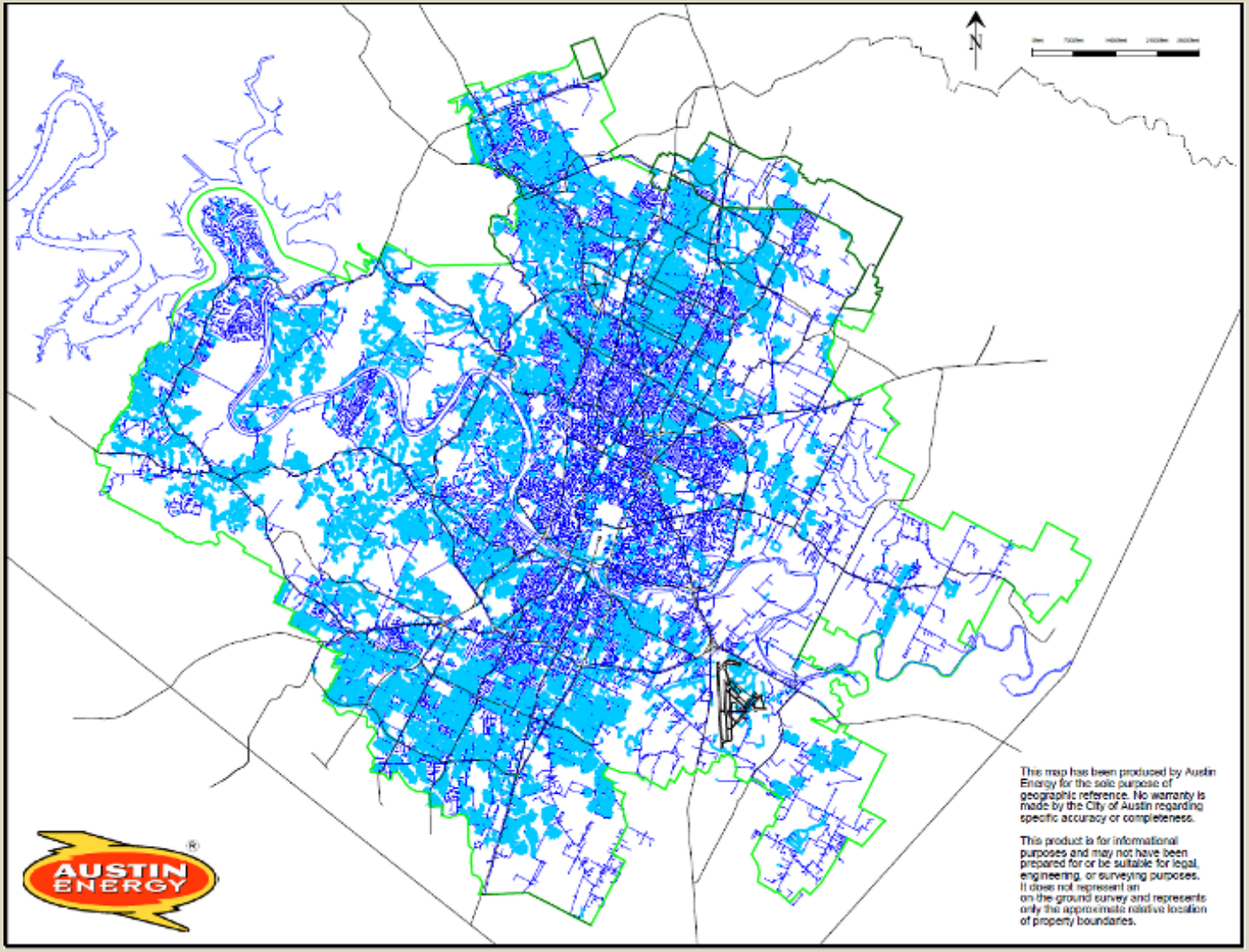
Distribution System Overview



AE Distribution System

- Distribution system consists of primarily 12,500 volt feeders and equipment from substation to the customer's meter
- Dense distribution network built across 437 square mile service area
  - > Typically no new line or substation built for single residence, apartment complex or mixed use development
- As overall demand exceeds capacity of infrastructure, AE expands system to ensure reliability
  - > Distribution system improvements may include a new substation or transformer, new three phase lines
  - > Supports existing and future customers

Distribution System Map



Light Blue – Underground

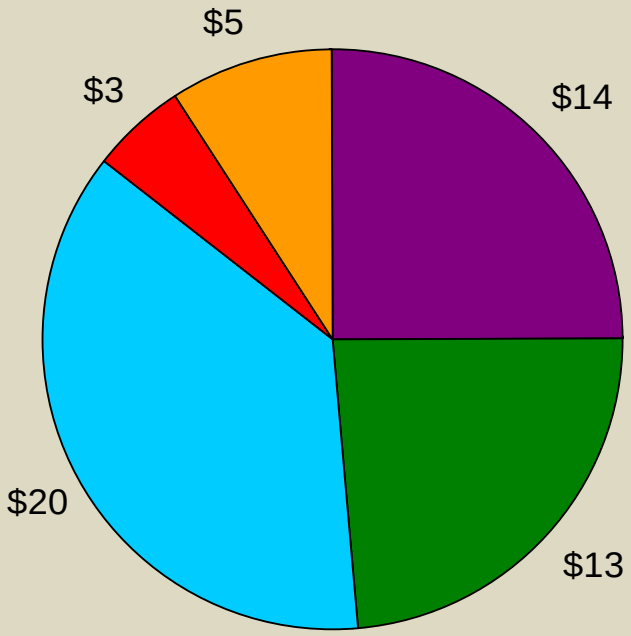
Dark Blue – Overhead

Distribution Assets

- **General Distribution System – 5,400 MVA**
  - > 59 distribution substations
  - > 78,715 distribution transformers
  - > 5,403 miles overhead
  - > 5,995 miles underground
- **Unique Assets**
  - > Downtown network - two substations, 450 MVA
    - Single vault on customer site may serve multiple customers
  - > Dedicated industrial services – 567 MVA
    - Redundant services paid for by customers

Distribution Spending

Typical Annual Capital Spending
$55 (millions)



Line Extension Policies & Cost Recovery

- What Is Contribution In Aid of Construction (CIAC)?
  - Nonrefundable contribution paid by a customer
  - Plant funded by CIAC not included in base rates
  - No standard CIAC/line extension policy in Texas

Typical Customer Costs

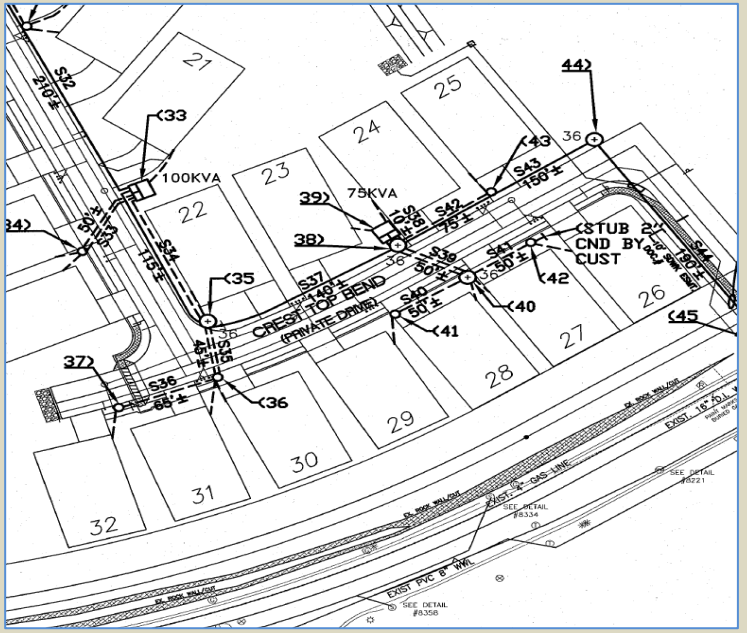
- Majority of new customer connections are underground
- Customer builds and pays for civil work on property
  - > Includes equipment pads, trenching, conduit, and subsurface structures
- AE assumes ownership of civil facilities after they pass inspection for AE's use
- Civil represents at least 50% of total cost
- Cost is not paid for by AE, so it is not included in revenue requirements used to set rates

Additional Costs to Customer

- Additional money collected for:
  - > Excess facilities requested by customer
  - > Underground electric service equipment (ex. switchgear)
  - > Dual feed & primary metered services
  - > Replacement/relocation of existing facilities on or adjacent to customer site at customer request
  - > After hours work requested by customer
  - > Temporary power
    - Installation of all temporary facilities
    - Removal of all temporary facilities
  - > Some fees subject to 15% mark up as defined in fee schedule

Single Family Subdivision

- 55 units, average 3,000 square feet
- Installed eight pad mount transformers and 4,100’ underground cable
- Total project cost = $108,704.20 (including transformers)
- 300’ allowance per meter = $181,178.30
- Projected revenue allowance = $46,763.64
- Developer contribution = $0 to AE; transfer all civil infrastructure to AE
- Estimated civil construction cost = $124,000
- Cost per unit: AE $1,976; developer $2,255

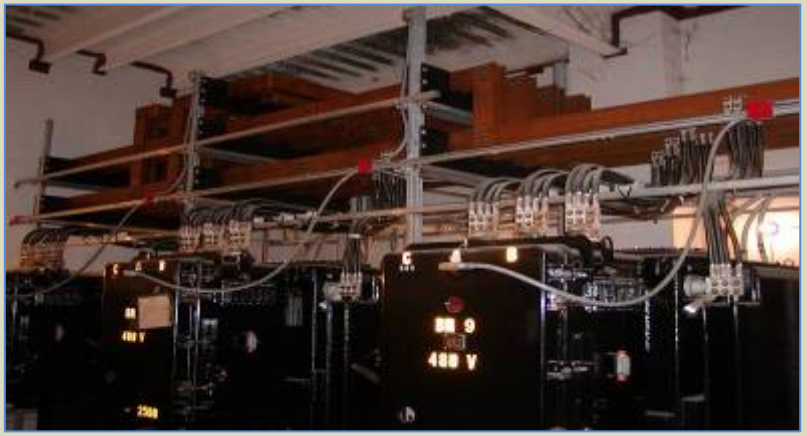


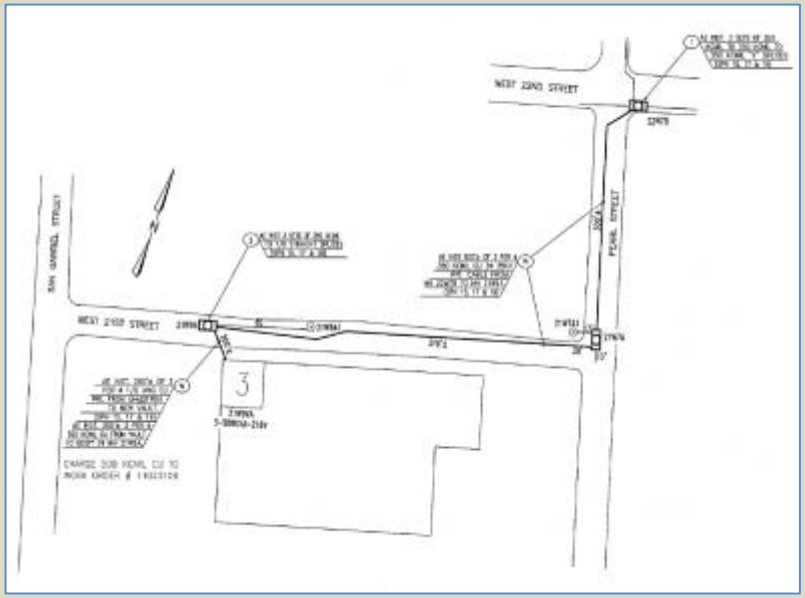
Apartment Development

- 352 units, average 800 square feet
- Installed 15 pad mount transformers and 8,800’ underground cable
- Total project cost = $178,894.97 (including transformers)
- 300’ allowance per meter = $1,159,540.80
- Projected revenue allowance = $97,521.06
- Developer contribution = $0 to AE; transfer all civil infrastructure to AE
- Estimated Civil Construction Cost = $232,000
- Cost per unit: AE $508; developer $659

Network Project

- 135 units, average 750 square feet
- Installed three network transformers and 8,100’ network cable
- Total project post = $385,193.54 (including transformers)
- 300’ allowance per meter = $988,245.00
- Projected revenue allowance = $32,807.43
- Developer contribution = $0 to AE; transfer all civil infrastructure to AE
- Estimated civil construction cost = $1,100,000
- Cost per unit: AE $2,853; developer $8,148





Examples of AE Project Costs

- **Residential**
  - > Single family subdivision, town home, & condo developments
  - > New construction on vacant lots
  - > Additional residential units on already served lots
  - > Average total cost: $3,000/meter
- **Apartment Complexes**
  - > Moderately dense load
  - > Existing parcels repurposed to meet City growth objective
  - > May include mixed use with a commercial component
  - > Average total cost: $750/meter
- **Network**
  - > Very dense load
  - > Requires specialized equipment which increases cost
  - > Average total cost: $3,000/meter
- **Commercial & Industrial**
  - > Customer specific load requirements
  - > Higher revenue through demand charges
  - > Average total cost: $16,000/meter

Area Utilities Policies and Fees

Utility	CIAC Policy Summary
Pedernales Electric Cooperative	CIAC = (Direct Cost + System Cost) – (Annual Revenue/Return Factor)
Bluebonnet Electric Cooperative	Residential CIAC = Total Cost – ($1,200/service) Commercial CIAC = Total Cost – ($350/service)
Oncor Electric Delivery	CIAC = Direct Cost – Standard Allowance + Tax Liability + Franchise Fees Standard Allowance Factors: Secondary Service > 10kw - $155/kW Primary Service > 10 kW - $79/kW 300' Allowance for Residential Customers
Austin Energy	CIAC = Total Cost (excl. transformers & services) – Allowance (cost of 300 feet/customer & 20% of 3 year revenue)
CPS Energy	Extends Distribution System at Its Discretion

Line Extension Fees Collected

- AE typically budgets a credit of $6 million for CIAC – 30% of total budgeted for new services
    - On-site customer work to relocate AE facilities
    - Costs above standard OH service
    - Cost of excess facilities needed to meet customer's business needs beyond basic service
- Most new services constructed in Austin are underground; developer installs civil which is at least 50% of the total cost of new electric service
- With CIAC and civil work by customer, they typically contribute 50-75% of the new service cost (under current policy)

Complexity of Collecting More

- Need more robust accounting system for customers to pay additional cost for on-site and portion of system improvements
- New system would capture system improvement costs for allocation to new users and actual job costs for customers who prefer to pay actual vs. estimated cost
- Significant impact on overall construction costs will lead to increased real estate and rental costs

Recommendations

- Implement new fee of $100 per Electric Service Planning Application to be collected when electric permit is issued
- Carefully consider timing and impact of policy changes to ensure consistency with COA economic development and growth strategies
- Policy should limit financial risk to utility and current customers, but not stifle economic development or result in relocation to less desirable areas
- Policy changes should be easily calculated by customers, staff, and developers

Proposed Policy Comparison

Service Request Category	Current CIAC Collection	Proposed CIAC Collection
Overhead	$0 unless exceeding 300 feet allowance	5 year period to phase up to 75% of all costs including transformers
Underground Residential	Civil work by customer; Excess facilities charges	Civil work by customer; 5 year period to phase up to 75% of all costs including transformers
Network	Civil work by customer; Excess facilities charges	Civil work by customer; 5 year period to phase up to 75% of all costs including transformers
Commercial	Civil work by customer; Excess facilities charges	Civil work by customer; 5 year period to phase up to 75% of all costs including transformers
Industrial/Primary	Negotiated	Negotiated

Implementation

- Proposed start date: October 2014
- Ramped up collection of CIAC:

Fiscal Year	2015	2016	2017	2018	2019
CIAC %	15%	30%	45%	60%	75%

- Policy changes within AE to support estimated or actual charges
- Staffing increase within AE to accommodate additional work functions, customer concern mitigation, and meet customer time tables
- Austin Energy will need software systems to facilitate efficient work flow

Questions?