CITY OF CORAL GABLES

FOR DISCUSSION PURPOSES ONLY

Report to Coral Gables City Commission

Ballpark Estimates from Utilities for Conversion of Citywide System from Overhead (OH) to Underground (UG) and Recommendations for City Consideration

Tuesday, November 12, 2019

Presentation Outline

- City team
- History of City discussions about undergrounding
- The electrical system
- Current utility infrastructure within the City
- Analysis of Pursuing a Citywide Underground System
- Compare Typical Overhead and Underground Structures
- Summary of Ballpark Estimates from Utilities
- Additional Savings, Costs, and Factors
- Cost Analysis and Comparison
- Recommended Next Steps and Timeframe
- Questions and answers (Q&A) from City team and from utilities present

City of Coral Gables Team

- **City Manager**
- **City Attorney**
- **Assistant City Manager for Operations**
- **Deputy City Attorney**
- **Acting Public Works Director**
- **Finance Director**

- **Stantec – Ramon Castella**
  - Global engineering and engineering consulting company focused on communities and community projects
  - Over 30 years of engineering and project management experience including on large-scale community projects and utility matters
  - Project Manager on overhead-to-underground conversion projects in Key Biscayne, Homestead and Golden Beach
  - Project manager and engineering consultant to the City

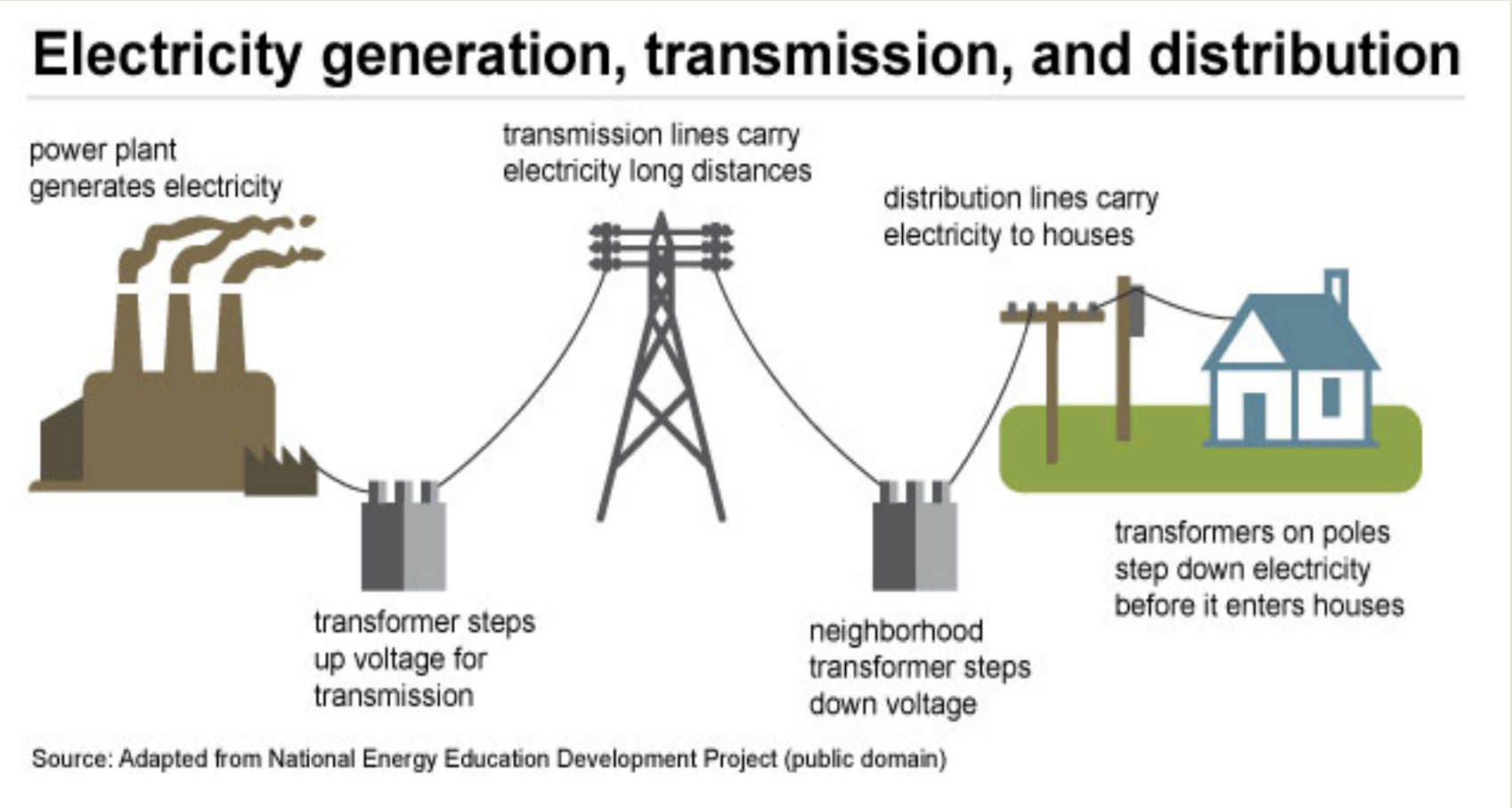
- **Hamptons Group – Jeffrey Bartel**
  - Over 30 years in government, law, business, and utilities including strategy, external & community relations, stakeholder / campaign communications, and issue management
  - Served as senior executive in external and corporate affairs, regulatory affairs, and compliance at FPL and its parent company NextEra Energy. Helped lead FPL's storm preparation and restoration efforts during the seven hurricanes of 2004 and 2005
  - Strategic advisor and counsel to the City on utilities matters
  - Lifelong Coral Gables resident

Some history of City consideration of conversion from overhead to underground

- 1992: After Hurricane Andrew devastated southern Miami-Dade County (electrical system rebuild) and caused significant damage to the City's electrical system (partial rebuild / repair), the City began conversations about pursuing FPL to bury utility lines
- 2004–5: After several named storms affected the City causing massive power outages, the City discussed, and briefly examined, converting the overhead electrical distribution system to an underground system *(Resolution 2005-179)*. The City also established a Utility Service Reliability Task Force which discussed FPL's reliability performance and underground conversion among its issues
- 2017: After Hurricane Irma caused massive power outages City-wide that lasted for weeks for many customers, the City formally expressed its concerns related to FPL's performance and pursued enforcement action against the company *(Resolution 2017-247)*. The City Commission authorized litigation against FPL for allegedly violating the City's franchise agreement with the utility *(Resolution 2017-308)*. The City also received a report from Stantec regarding conversion to underground utilities
- 2019: The City settled litigation with FPL with court order finding FPL—and only FPL—obligated to maintain areas adjacent to its poles and solely responsible for all vegetation management. City Commission held workshop in May to discuss overhead to underground utility conversion. Resolution adopted on May 28th by City Commission to direct City Attorney and City Manager to (1) obtain nonbinding ballpark estimates from the utilities (FPL, AT&T, and Comcast) and (2) report back to the City Commission in fall 2019 (*Resolution 2019-132*)

The Electrical System

- Generation
- Transmission
- Distribution (FLaTS: Feeders, Laterals, Transformers, Singles)



Current utility configuration in the City

Nearly all overhead utility facilities in the City are within FPL easements and on FPL-owned poles. The conversion of the electrical system would drive any process for the other co-located utilities (*i.e.*, AT&T, Comcast).

~ 24,000 Total FPL Customers served by 13 substations

Residential, commercial, industrial, governmental, public lighting
(Source: FPL)

Single Family Homes ~ 12,000
Multi-Family Units ~ 2,000
Non-residential (commercial, industrial, governmental) properties ~ 1,600

North of Sunset Drive

- ~ 80% currently served overhead

South of Sunset Drive

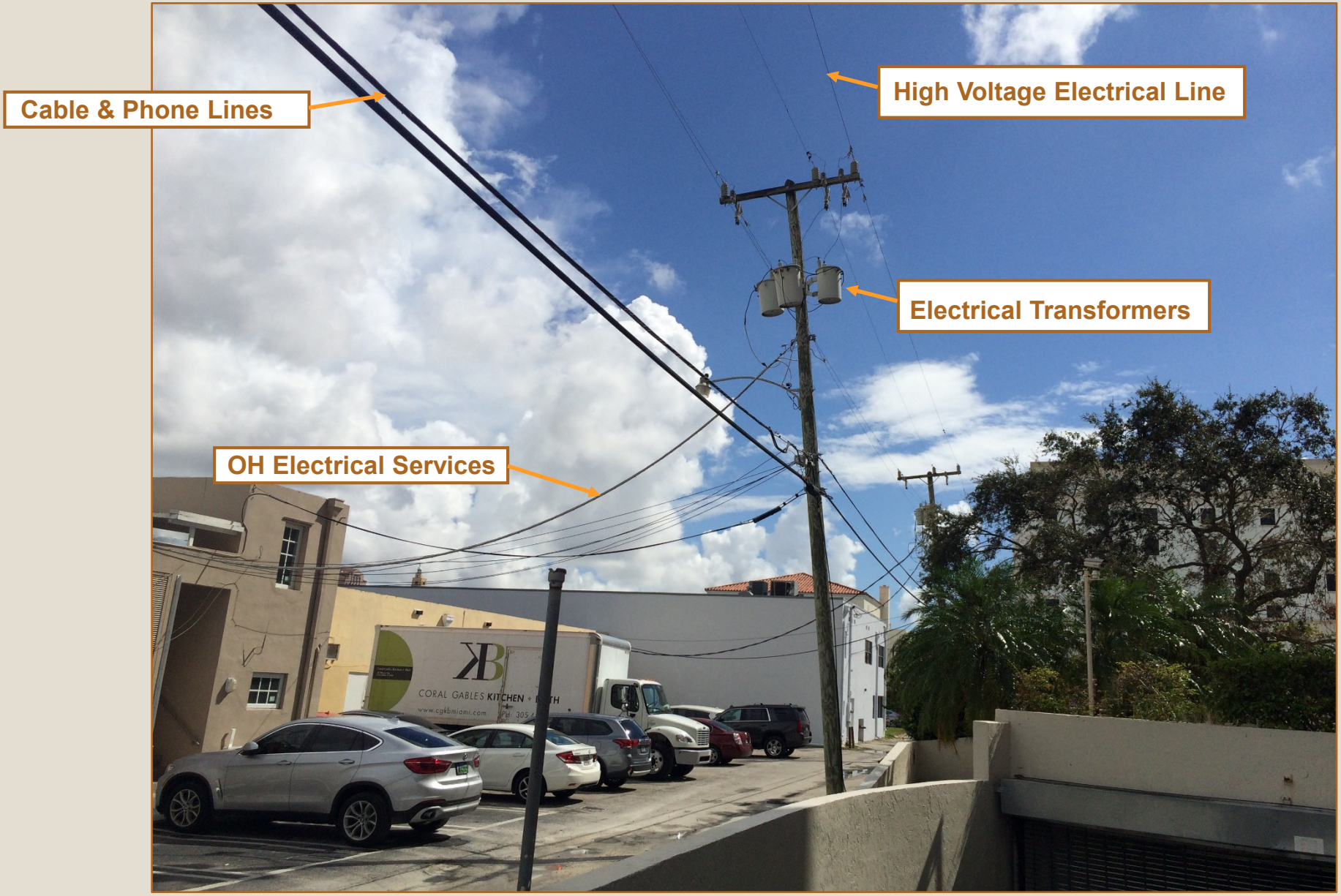
- ~ 80% of homes served underground (UG)
- ~ 100% of multi-family units served underground (UG)

Analysis of Pursuing a Citywide Underground System

- **The first question is one of cost-benefit with paying for significantly increased reliability**
  - What is "acceptable" to residents and businesses for community and business disruption due to prolonged outages caused by hurricanes, major storms, or even rain or windstorms?
    - How long until an adult living facility, hospital, school, gas station has power?
    - How long until you can comfortably live in your home? What about the frail?
    - We either have hurricane amnesia or hurricane fatigue
  - Will residents and businesses be willing to pay to avoid most outages?
  - What is the tolerance for outages from rain, thunderstorms, and windstorms?
- **How long is an acceptable time to be out of power after a hurricane OR on non-storm days?**
  - Difference between repairing the system and community, and rebuilding the system and community
- **Long-term aesthetic benefit, including limited vegetation management, with underground system**
- **Customers not needing to buy generators**
- **Life and safety issues of traffic lights, street lamps, downed lines, generators, life-sustaining equipment in homes, and heat**
- **Positive effect on property values**
- **Positive effect on (1) attracting new businesses to the City and (2) City tax base**
- **A game-changer on business and lifestyle continuity and aesthetic including arboreal plan**
- **Potential all-fiber telecommunication system**
- **Need to engage residents about financial impact and construction aesthetic**
  - A estimated total $25,000 impact on a customer would amount to ~$4.00/day
  - Businesses would deduct or pass on cost
  - Need to address residents who already have underground service at their home. Their hardening is not currently completed "upstream." They are still affected by City-wide reliability and safety
  - Need to address economically challenged residents

Typical Ground/Pad-Mounted Transformer

Typical Overhead (OH) Facilities



Typical Ground/Pad-Mounted Switch Cabinets

Typical Home Conversion to Underground

Overhead Service

Underground Service

Undergrounding Does Not Include Transmission Lines and Substations

Summary of Nonbinding Ballpark Estimates for Overhead to Underground Conversion

NOTE: Ballpark estimates have not been negotiated and are rounded to the nearest $mm. Negotiation with all providers will take place to reduce these estimates to actual acceptable contractual amounts.

Florida Power & Light (FPL)

$ 120 mm for in-city limits, PLUS
$ 21 mm for feeders connecting from city limits to out-of-city substations

- In order to fully reap underground benefits, it is important to extend undergrounding from the last customer up to the substation

MINUS 25% discount would apply under a Florida Public Service Commission (FPSC) rule for local government-sponsored projects. Therefore:

$ 90 mm for in-city limits = discount of $30 mm
$ 16 mm for feeders connecting from city limits to out-of-city substations = discount of $5 mm

Total FPL estimate: $ 106 mm

AT&T

Scenario 1: $ 141 mm (utilizing existing mix or copper and fiber)
OR
Scenario 2: $ 102 mm (converting entire system to fiber)

Comcast

$ 15 mm

Additional Savings, Costs, and Factors

Additional Savings:

- Florida Power & Light (FPL)'s work, actions, and customer relations are governed strictly by a Florida Public Service Commission tariff/rule. In addition, FPL may not charge for removal of its facilities, and must provide a 25% discount to the City. The City may pursue remedy through the Florida Public Service Commission for noncompliance.
- Ballpark estimates are generally worst-case scenarios without the benefit of negotiation, project engineering, and other efficiencies.
  e.g., The AT&T estimate, as presented, is very high relative, and compared, to other projects

Additional Costs/Factors:

- Binding estimates provided by utilities (but these costs should be credited to the City as part of the contract price)
- Site restoration
- Trenching/backfilling
- Conversion of individual customer service entrances from overhead to underground
- Easements as needed for equipment (ground-level pad mounted transformers and switch cabinets)
- Project supervision and administration

Ballpark estimates do not provide details of equipment, labor, potential project phases, etc. We expect additional opportunities for savings once contract negotiations begin and other strategic factors are considered

Cost Analysis & Comparison

COST ANALYSIS – UNDERGROUND CONVERSION							
MUNICIPALITY	**FPL Electrical Estimate (with 23% Credit and Restoration Costs)**	**AT&T Telephone Estimate**	**Cable Estimate**	**Total for all 3 Utilities**	**Number of Home Connections**	**Average COST per HOME for Connection up to PROPERTY LINE**	**Additional COST per Home for Lateral Connection from PROPERTY LINE to METER**
	A	B	C	D=A+B+C	E	F = D / E	
Town of Golden Beach	$6,396,775	$387,666	$98,750	$6,883,191	394	$17,470 ($20,964)*	$2,000 to $3,000
Town of Palm Beach	$38,642,760	$6,261,750	$6,261,750	$51,166,260	2851	$17,947 ($21,536)*	$3,000 to $5,300
Town of Jupiter Island (1000 foot test project)	$8,000,000	N/A	N/A	$8,000,000	575	$13,913 ($16,696)*	N/A to N/A
Sunny Isles (Atlantic Isle Phase Budget)	$1,000,000	N/A	N/A	$1,000,000	61	$16,393 ($19,672)*	N/A to N/A
Village of Key Biscayne	$11,200,000	$2,946,000	$2,946,000	$17,092,000	982	$17,405 ($20,886)*	$3,000 to $4,500

*2017 Dollars

Cost Estimate for City-wide conversion from Overhead to Underground

Our estimate is based on:

- Recent projects in the Town of Palm Beach, Town of Golden Beach, and elsewhere
- Information provided to the Florida Legislature during its last session
- Data submitted to regulatory entities
- Ballpark estimates from the utilities

We estimate the total cost of conversion of the City of Coral Gables from overhead to underground would be approximately $250 - $275 million, consistent with our prior calculations

- Estimated total cost per home would be ~$20K plus a ~$3 - 5K cost for service conversion for the typical home = $25K
- Estimated annual payment over 20 years at 5% interest would be approx. $1,500
- Estimated cost of ~$4.00 per day

Recommended Next Steps & Timeframes

THE PROCESS WE HAVE RECOMMENDED IS INTENDED TO BE EFFICIENT AND COST-EFFECTIVE IN TERMS OF RESOURCES, BUDGET & TIMING—WITH FULL TRANSPARENCY TO ENGAGE & COMMUNICATE WITH COMMUNITIES/RESIDENTS

- No effect on 2019-2020 budget
- Avoid paying for utility binding estimates until after voter input and/or approval
- Schedule vote by electors to approve project to piggyback on regular August election calendar to avoid special election issues and costs
- Break-up City-wide project into manageable phases to provide engineering efficiencies, uses of best practices and technology, and potential changes in utility landscape

1. **Prepare strategy and potential design for property owner assessment structure**
   - Considerations of Reliability, Safety, Aesthetics, and Individual Service Conversions
   - Design assessment structure that is fair to all
2. **Prepare detailed vignettes / scenarios / renderings for typical neighborhoods for use with stakeholder communications**

   e.g., North Gables; Central Business District; South Gables
3. **Robust stakeholder / voter engagement and information—full transparency**
   - Hold community and neighborhood meetings (presentations, Q&A, mutual education, issues, concerns, dynamics) - scope, expectations, disruption, costs
   - Best practices website and newsletters/e-newsletters, and potential mailed surveys

Recommended Next Steps & Timeline (cont.)

4. **Preliminarily engineer the project with utilities to discuss potential phasing of the City-wide project into workable, definable projects based on engineering criteria, with separate contracts**
   - Gain benefit of efficiencies, lessons learned, and new technologies
   - Avoid the expiration of the 180-day expiration of binding estimate from FPL
5. **Hold one or more City Commission workshops on or before early April 2020**
   - Discuss recommendations on assessments and financing
   - Discuss recommendations on project scope and phasing
   - Discuss community engagement findings
   - Discuss status of other utility issues

     e.g., Florida Supreme Court issue on electric generation and transmission; FPL Storm Hardening Program; AT&T plans for all-fiber and 5G
6. **April 28 (or May 12 as backup) City Commission to consider resolution authorizing vote of electors and approve ballot language**

   e.g., Will vote be a binding or non-binding? Require majority or a supermajority of electors to approve the project?
7. **August 18, 2020: Hold vote of electors as prescribed by the City**
8. **IF approved by voters, continue to finalize scope and phasing**
9. **Prepare bonding for entire project / funding schedule for phases**

Recommended Next Steps & Timeline (cont.)

10. **Prepare robust, best practices communications portal, website, and contact for residents / property owners**
11. **Prepare legal easements**
12. **Work with City arborist on aligning long-term City aesthetic / beautification plan**
13. **Engineer City-wide project into manageable phases that can be done simultaneously or sequentially**
    - workable, definable projects based on engineering and financial, not political, criteria -- from substation "downstream" to the "last customer"
    - separate contracts for each phase
14. **Seek and obtain binding estimates from utilities**

    e.g., Fee to obtain binding estimate from FPL is good for 180 days and is 1% of total project, which is then credited to the contract
15. **Enter into contracts as needed under CCNA for overall project management and engineering, and with the three utilities by phase**
16. **Execute and administer project and its phases, including regular reporting to the City Commission**

We anticipate the complete project would likely involve 20+ phases and last 10 years once commenced, with project financing by residents over a to-be-decided 20- or 30-year period

THANK YOU

Questions and answers (Q&A) from City team and utilities present