

# Utilities 101: Energizing North Carolina

**WELCOME!**

While you wait...

## **ZOOM Logistics:**

- All attendees are muted.
- At the bottom of your screen, choose “speaker view” as your viewing option.
- There will be a Q&A session following the presentation.

## **HOW to ask questions?**

- Click “Q&A” button at the bottom of your screen.
- Type in your question.
- The moderator will read your question aloud.



**November 10**

# Utilities 101: Energizing North Carolina



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*The energy behind public power*

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# Utilities 101: Energizing North Carolina



**November 10**

# Utilities 101: Energizing North Carolina



**Carl Rees**

**Senior Economic Developer  
ElectriCities of North Carolina**

**November 10**

# Utilities 101: Energizing North Carolina



**Richard Imel**

**Manager – Strategic Economic Development  
Dominion Energy**

**November 10**

# Utilities 101: Energizing North Carolina



**Bill Roberts**

**Senior Economic Development Manager  
Duke Energy**

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# Utilities 101: Energizing North Carolina



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# Utilities 101: Electric

NCEDA webinar series

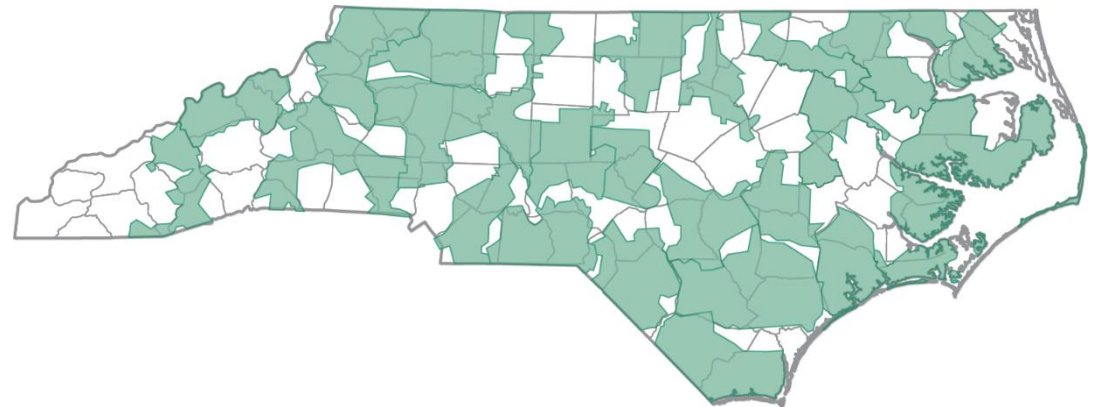
Ryan Nance, Director of Economic Development

November 10, 2020



**NC** Electric  
Cooperatives

Your Touchstone Energy® Cooperatives 



**24%**  
of the population

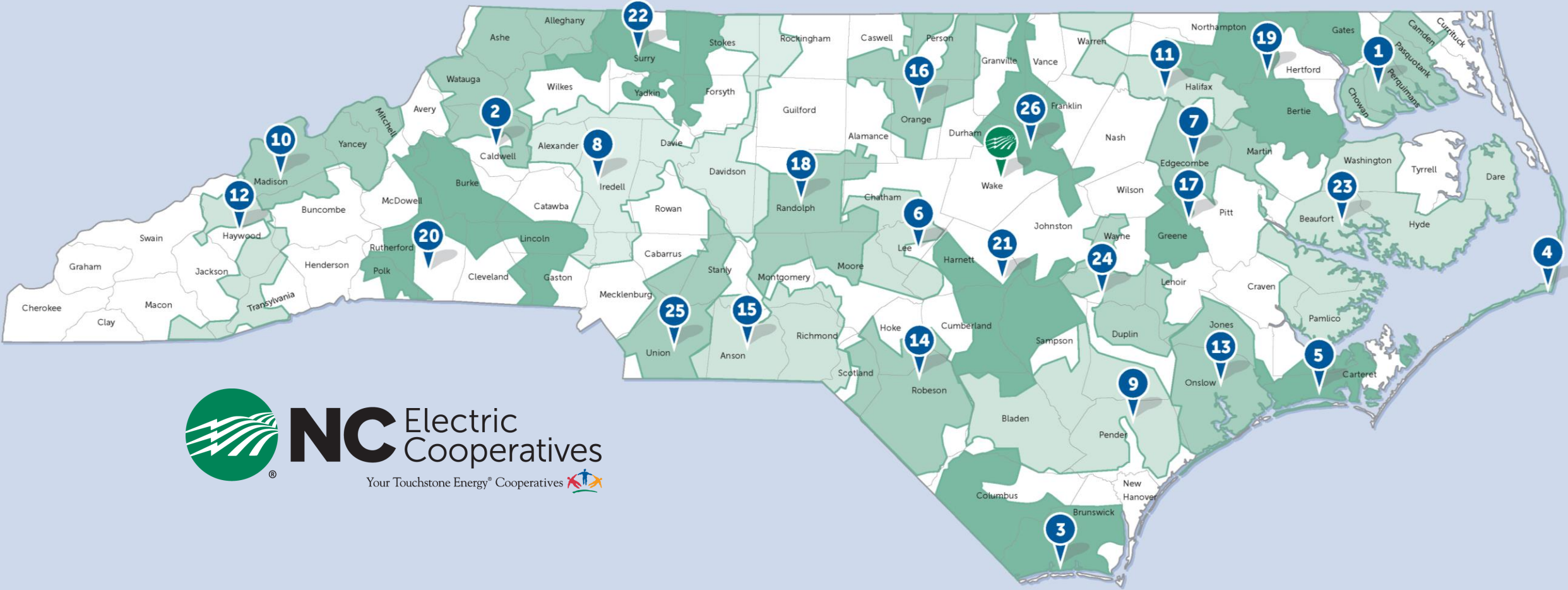
**45%**  
of the land mass

**93**

Counties we work in around the state of North Carolina

**26**

Distinct member-owned, not-for-profit cooperatives









# Economic Development Resources

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- USDA Rural Economic Development **Loans** (REDLGs)
- Member **loans** for 20 participating co-ops
- Revolving **loan** funds
- Technology Infrastructure **Loans**
- Matching **Grants** Program
- Electric and broadband infrastructure
- In-kind work (e.g. short-notice site clearing)

# Contact Info

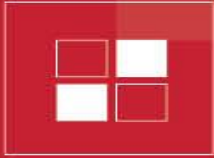
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  - 919-749-6012

# Utilities 101: Energizing North Carolina



**November 10**



# ElectriCities of NC Programs & Services

*Presented by: Carl Rees  
Senior Economic Developer*

# NC Public Power

- Over 70 public power cities and towns in NC
- NC Public Power services more than 1 million residential, commercial and industrial customers
- Organization:
  - ElectriCities of NC

– NCEMPA



– NCMAPA1





# NC Public Power

## North Carolina Public Power Communities





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**Carl Rees**

**[crees@electricities.org](mailto:crees@electricities.org)**

**919-760-6315**

## **Economic Development Staff**



# Economic Development Services

- Strategic target marketing
- Industrial recruitment
- Retail/commercial recruitment
- Rate analyses
- Economic development planning and advisory services
- Grant opportunities







# Industrial Site Readiness



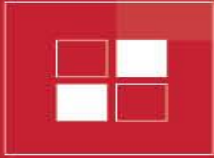
**ElectriCities can help identify & certify sites**

# Understanding the Customer

- How much power?
- When do they use more/less?
- Dual feed?
- What types of equipment?
- How sensitive to outages?
- ★ Pro tip: Ask for electric bills from a similar facility if they have them.

Utility Requirements		ELECTRICITIES OF NORTH CAROLINA, INC.	
Company Name: _____		Project Name: _____	
		Date: _____	
	INFORMATION		UNIT
<b>Electricity-Infrastructure</b>			
Voltage requirement	_____		Volts
Frequency	_____		Hertz
Phases	_____		
Amperage	_____		Amps
Peak demand (real power)	_____		Kw
Peak demand (apparent power)	_____		kVA
Power factor (kWh/KVA)	_____		
<b>Electricity-Consumption</b>			
Average consumption	_____		
Monthly	_____		kWh
Annually	_____		kWh
Load factor	_____		%
Significant power users	_____		
Hours of operations	_____		
Hours per day	_____		Hours
Shifts per day	_____		#
Days per week	_____		Days
Redundant electric power source	_____		
<b>Gas</b>			
Average consumption	_____		
Hourly	_____		cct
Daily	_____		cct
Monthly	_____		cct
Annually	_____		cct
Redundant natural gas source	_____		
Meter size	_____		Inch
Pressure at delivery	_____		psig
Interruptibility	_____		
<b>Water</b>			
Average consumption	_____		
Daily (average)	_____		Gallons
Daily (peak)	_____		Gallons
Monthly (average)	_____		Gallons
Annually (average)	_____		Gallons
Redundant water source	_____		
for the purpose of:	_____		Inch
Meter size	_____		
Internal water treatment	_____		
<b>Sewer</b>			
Average consumption	_____		
Daily (average)	_____		Gallons
Daily (peak)	_____		Gallons
Monthly (average)	_____		Gallons
Annually (average)	_____		Gallons
Meter size	_____		Inch
Water pre-treatment	_____		





## ElectriCities of NC Programs & Services

*For further information:*  
[crees@electricities.org](mailto:crees@electricities.org)  
(919) 760-6315

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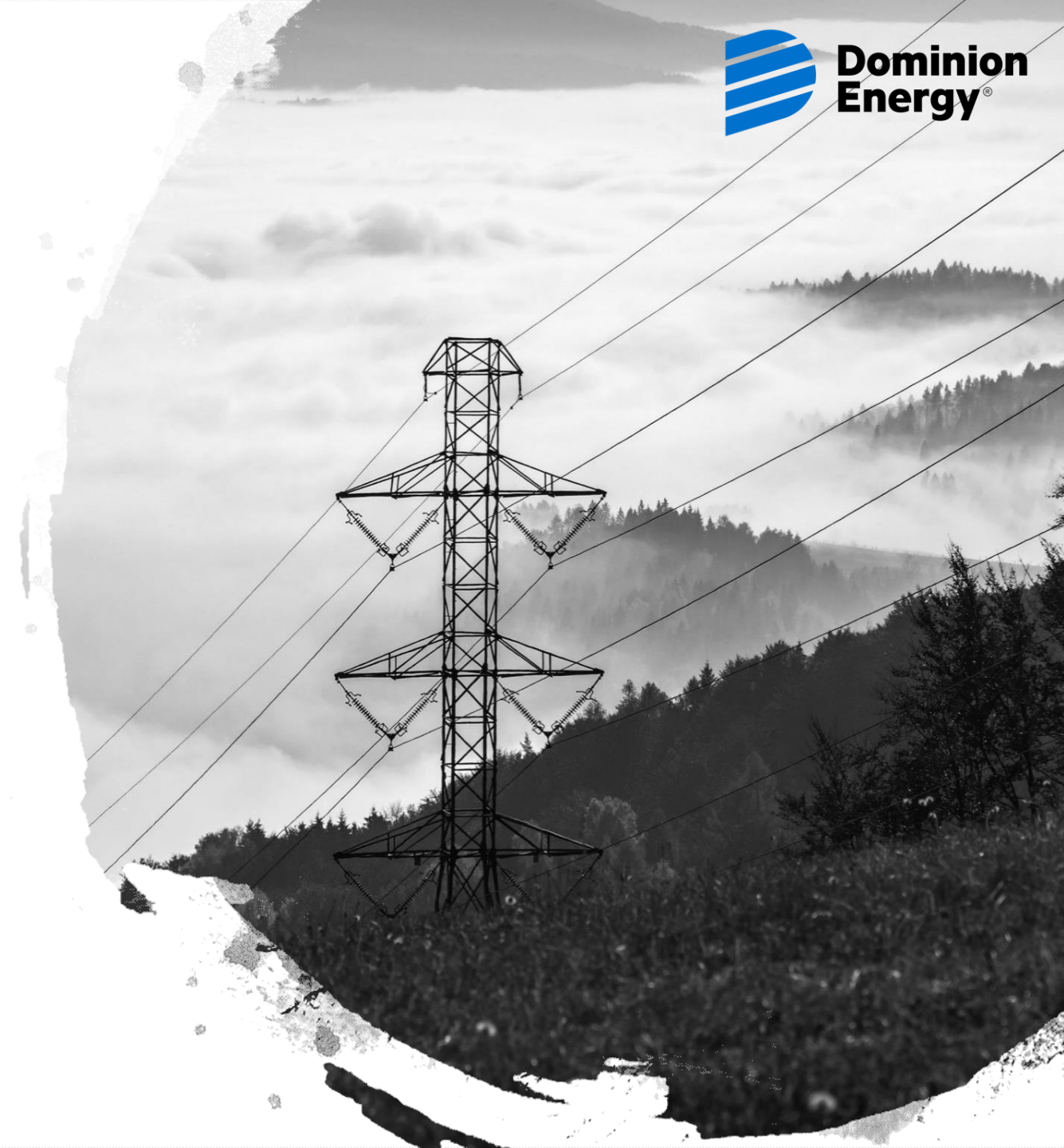
# Dominion Energy



# Dominion Energy Virginia/ North Carolina



- Electric Transmission
  - 6,700 miles of transmission lines
- Electric Distribution
  - 58,300 miles of distribution lines
  - 2.6 million franchise retail customer accounts in VA & NC
- Utility Generation
  - 19,900 MW of capacity
  - Balanced, diverse fuel-mix

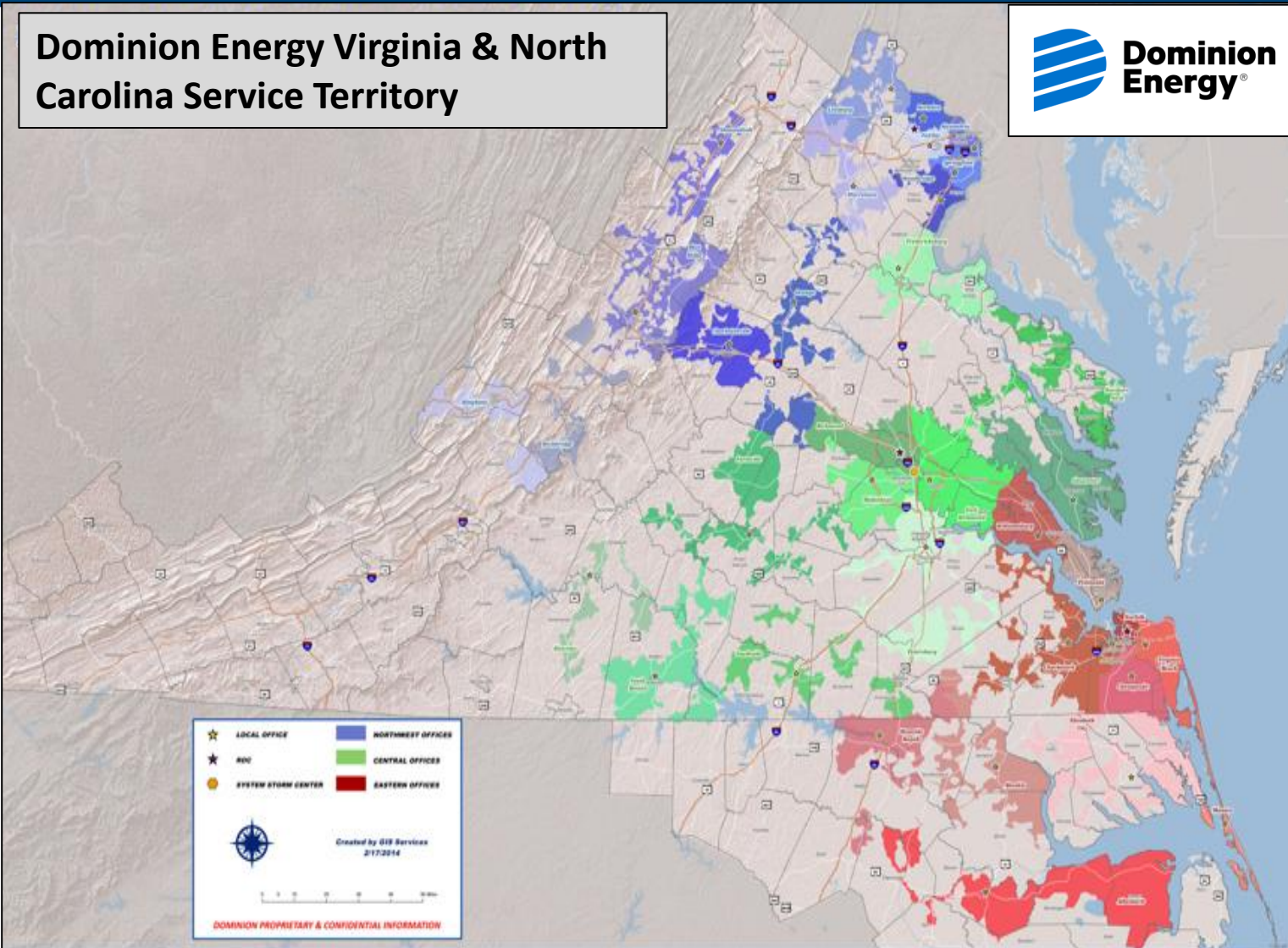




# Virginia & North Carolina Service Territory



Dominion Energy Virginia & North Carolina Service Territory



**Service Area Locator** – Helps to identify sites within our Virginia & North Carolina service territories.

Can be found using link below –  
<https://economicdevelopment.dominionenergy.com/va/our-region/service-area-locator/>

# Economic Development Resources



- Rates
  - Curtailable Rates
  - Time of Use
  - Real Time Pricing
- Incentives
  - Rider EDR NC –
    - Incentive to get customers to site or expand in our service area
    - 10% discount on load & energy usage for 48 months
- Site Selection Assistance
- Lead Generation



# Economic Development Team



Stan Blackwell –  
Director of Customer  
Service  
& Strategic Partnerships



Richard Imel –  
Manager Strategic  
Economic Development



Gizelle Siapno – Economic  
Development Market Specialist -  
Central VA, Southside VA



Bryan Smith – Economic  
Development Manager -  
Eastern VA, Shenandoah  
Valley VA, North Carolina



Blair Pritchard – Sr. Economic  
Development Market Specialist  
Northern VA

# Utilities 101: Energizing North Carolina



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# ECONOMIC DEVELOPMENT PROGRAM





**Stu Heishman**  
VP | Economic Development



**Beth O'Shields**  
Admin



**John Geib**  
Director | NC



**Steve West**  
Director | SC



**Erin Schneider**  
Director | IN



**Marc Hoenstine**  
Director | FL



**Alan Jones**  
Director  
Business Recruitment



**Kathryn Young**  
Business Performance  
Manager



**Keith Gabriel**  
Site  
Readiness

Bill Roberts,  
Donna Phillips,  
John Nelms,  
Tammy Whaley  
Craig Argo



Sandy Martin,  
Stuart Ames



Haley Tomlinson,  
Misty McCammack



Danielle Ruiz,  
Elizabeth Godwin

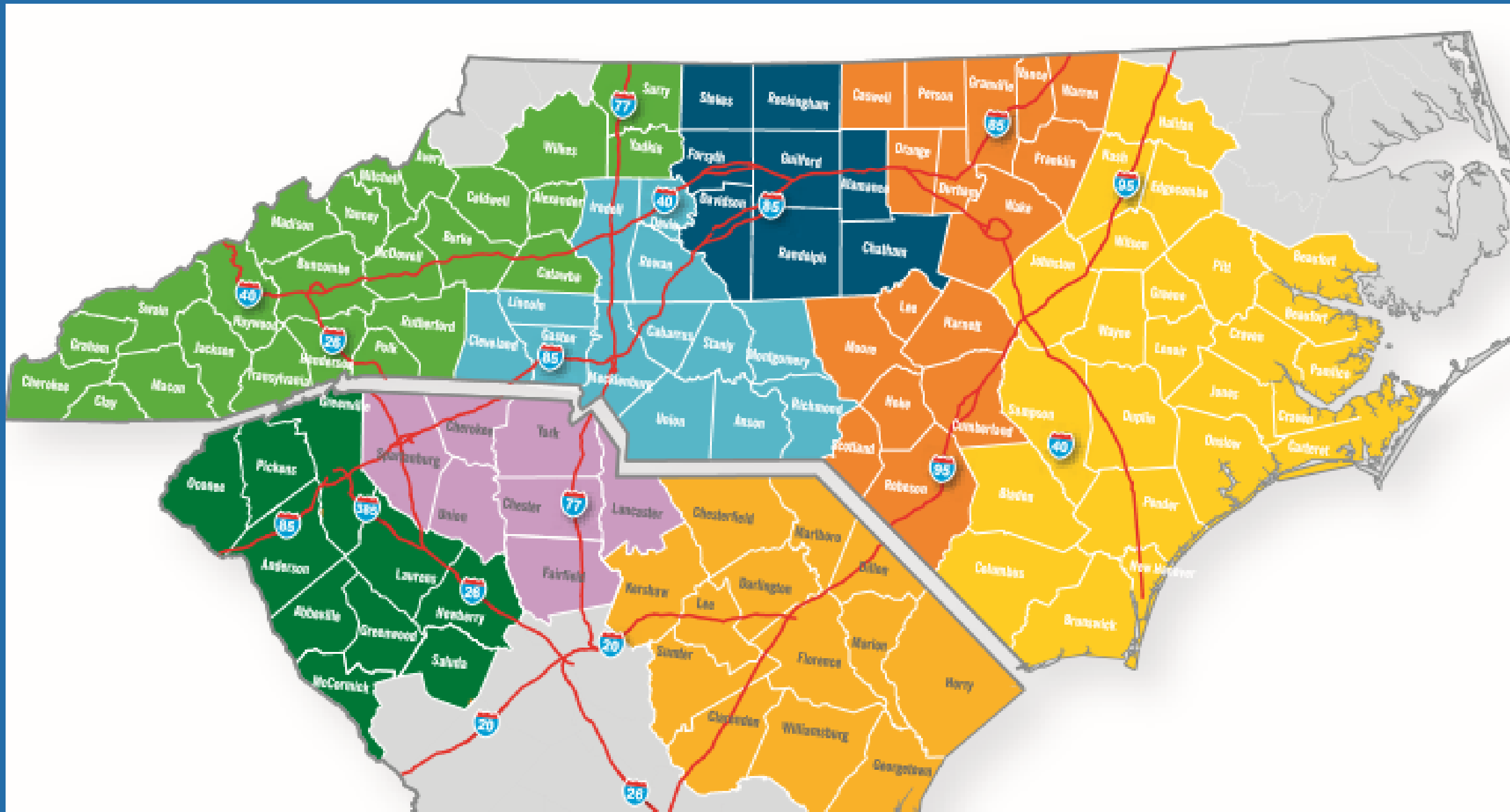


Jim McArthur,  
John Fremstad,  
Margaret O'Riley,  
Sarah Johnson



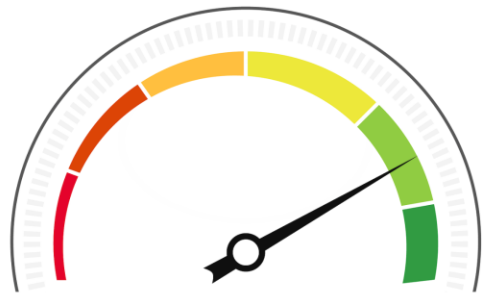
Ashlin Webster  
Kelsey Summey





## COMPANY BENEFIT

NEW ELECTRIC LOAD  
(GROW REVENUE)



MOVE THE NEEDLE

## COMMUNITY IMPACT

CREATE JOBS &  
CAPITAL INVESTMENT



### 2019 ENTERPRISE HIGHLIGHTS

**\$7.1 billion**  
in Capital Investment

**15,500**  
New Jobs

# Utilities 101: Energizing North Carolina



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Part I

# Electricity 101

## Duke Energy





# What an Electric Utility Needs to Know

In order to come up with an electrical cost estimate.

[Early Insights]

## DEMAND in kW

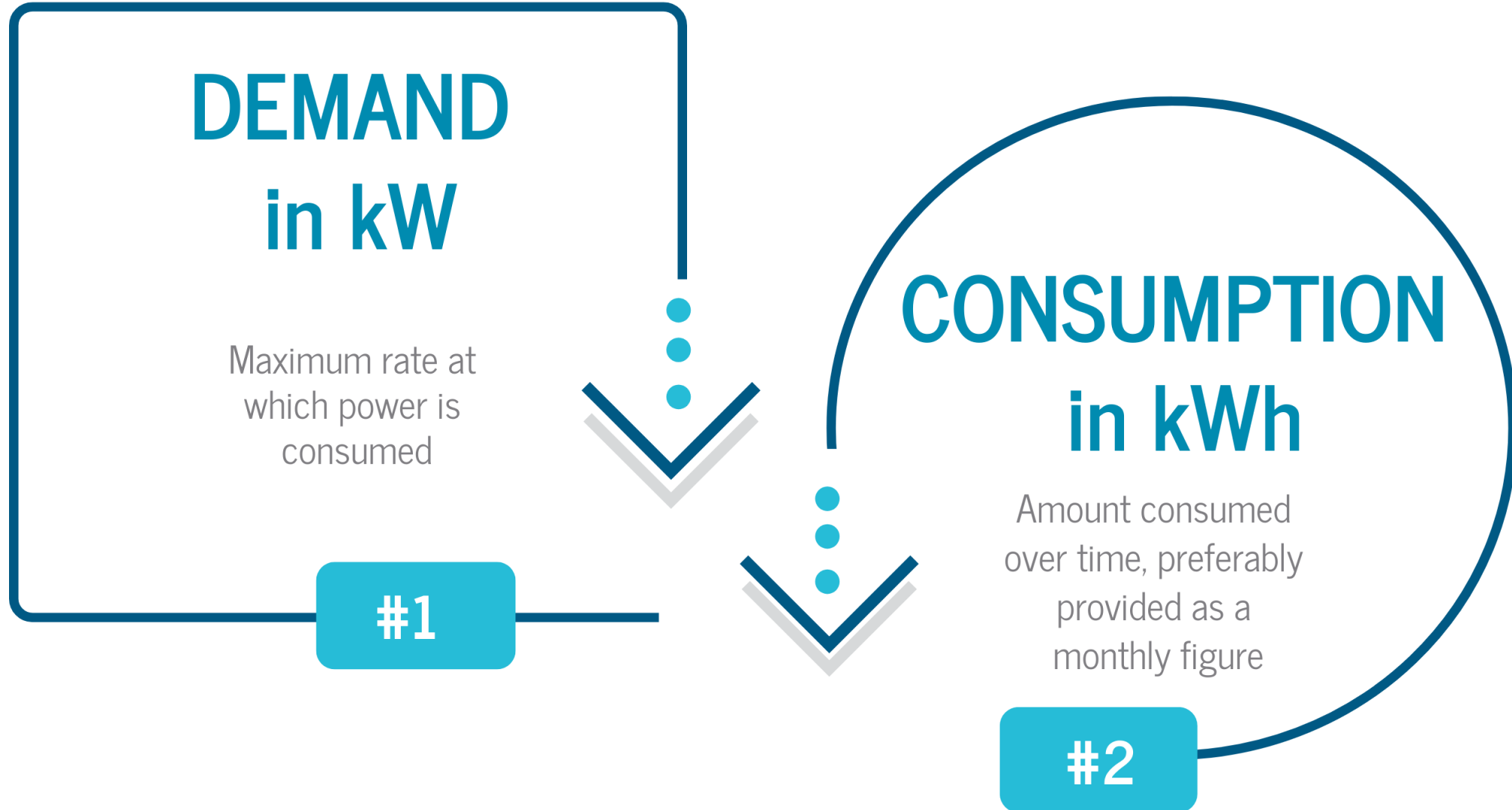
Maximum rate at  
which power is  
consumed

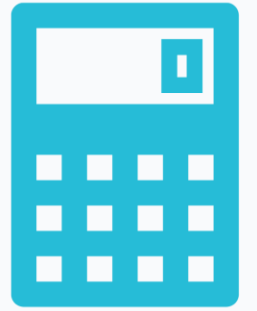
#1

## CONSUMPTION in kWh

Amount consumed  
over time, preferably  
provided as a  
monthly figure

#2





# kW Demand

**The average rate of energy consumption during a specific time period** (usually 15-30 minute intervals). Used in billing and cost calculations.

(Kilowatt= 1,000 Watts)

Large plant demand may be measured in Megawatts  
(mW = 1,000,000 Watts).

**\*ESSENTIAL\***



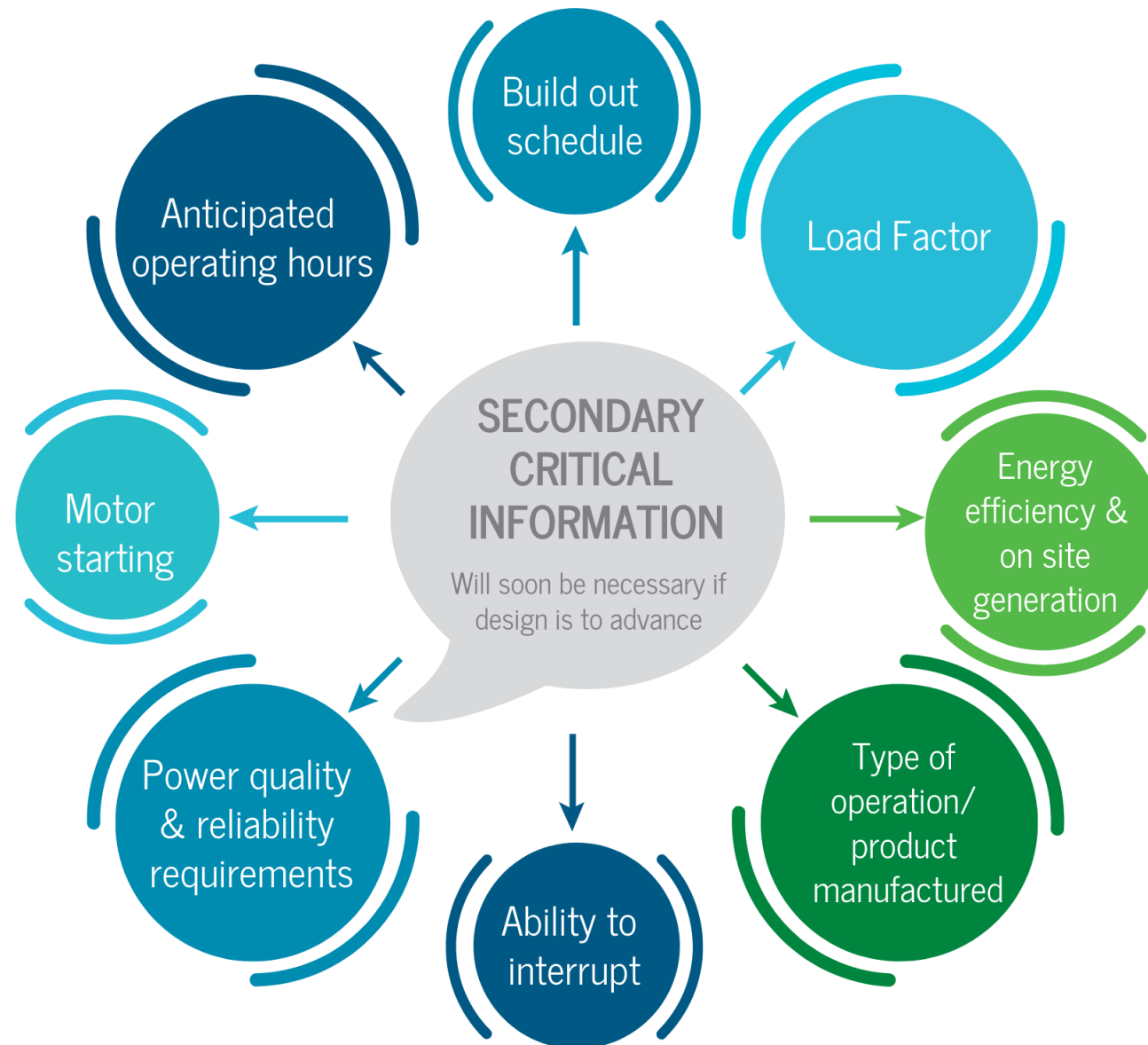
# kWh Consumption

(Kilowatt-Hours)

**Electric energy consumed over time**

Used to calculate monthly bills

\*ESSENTIAL\*



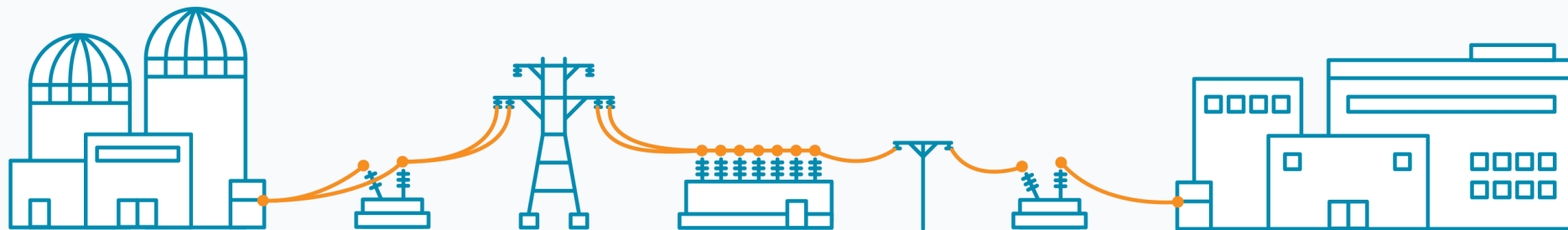
# Method of service is determined by several factors:

- Amount of electrical load
- Nature of electrical load
- Infrastructure available in proximity to a particular site
- Cost and practicality



# Overview of Power Supply

Understanding the power system means you have a good idea where power comes from and how your end customer can benefit from the electric service at their new business location.



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