Clean Energy Series

EarthKind Energy Consulting
Go Clean. Save Green.

BCW Business Council of Westchester
Build. Connect. Win.
thebcw.org

Business Resource Center

Atlantic Westchester
COMMERCIAL HVAC SOLUTIONS

Sunrise Solar Solutions

New York State of Opportunity. | NYSERDA Sponsored

Weds, July 8th	**@ 12n:**	**Who's leading the way?**	**$5 Billion in incentives for Solar, Clean Heating & Electric Vehicles**
Weds, July 15th	@ 12n:	Air Source Heating & Cooling	Murphy Bros, Atlantic Westchester, Daikin
Weds, July 22nd	**@ 12n:**	**Ground Source Geothermal**	**ZBF Geothermal, Brightcore Energy**
Weds, July 29th	@ 12n:	Solar & Battery Storage	Sunrise Solar
Weds, Aug 5th	**@ 12n:**	**Electric Vehicles**	**Green Business Partnership & surprise guests**
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NY State Total Energy Cost

$61 Billion / Year

Electricity:
$22 Billion

Thermal (Heat)
$14 Billion

Transportation Fuels:
$25 Billion

20 Seconds
of Silence
In Memory of
All Those Who
Took Their Last Breath
In 2020

NYS Greenhouse Gases

Big 3 (86%) = Energy

Electricity: 20%

Thermal (Heat) 32%

Transportation 34%

EarthKind Energy Consulting
Go Clean. Save Green.

Everyone is Unique

What is YOUR total energy expense?

How much are you (and your employees, tenants…) spending on…

Electricity

Heating & Cooling

Gas & Maintenance

Virtually Everyone can save 10% - 30% or more…

BUSINESS COUNCIL OF WESTCHESTER
Build. Connect. Win.

Clean Energy Series: HVAC

presented by

Atlantic Westchester

COMMERCIAL HVAC SOLUTIONS

Family-owned commercial and industrial HVAC business *(heating, ventilation and air conditioning)* in Bedford Hills, NY. Founded 1961, serving the NY Metro area.

Businesses, institutions and government facilities

Proactive maintenance, remediation, installation and energy efficient solutions based on client's unique facility needs.

Green Business Partnership (GBP) Green Business Certification December 2015 *(first HVAC company in the area)*

Business Council of Westchester's "Hall of Fame Award"

GBP "Outstanding Achievement in Transportation Award"

Westfair Communications' "Family-Owned Business Award"

Westfair Communications' "Milli Award"

Town of Bedford Conservation Board's "Green Award"

ACHR The News' "40 Under 40"

Clean Energy Series: HVAC

- The Value of Preventive Maintenance
- Efficient Technology to Improve Indoor Air Quality
- Air Source Heating and Cooling- July 15th

Clean Energy Series: HVAC

"According to the U.S. Department of Energy and the Building Owners and Managers Association (BOMA) energy savings of 5 to 30% can be realized through improved operations and maintenance of building systems..."

ENERGY STAR® (The Environmental Protection Agency)

WHY PREVENTIVE MAINTENANCE?

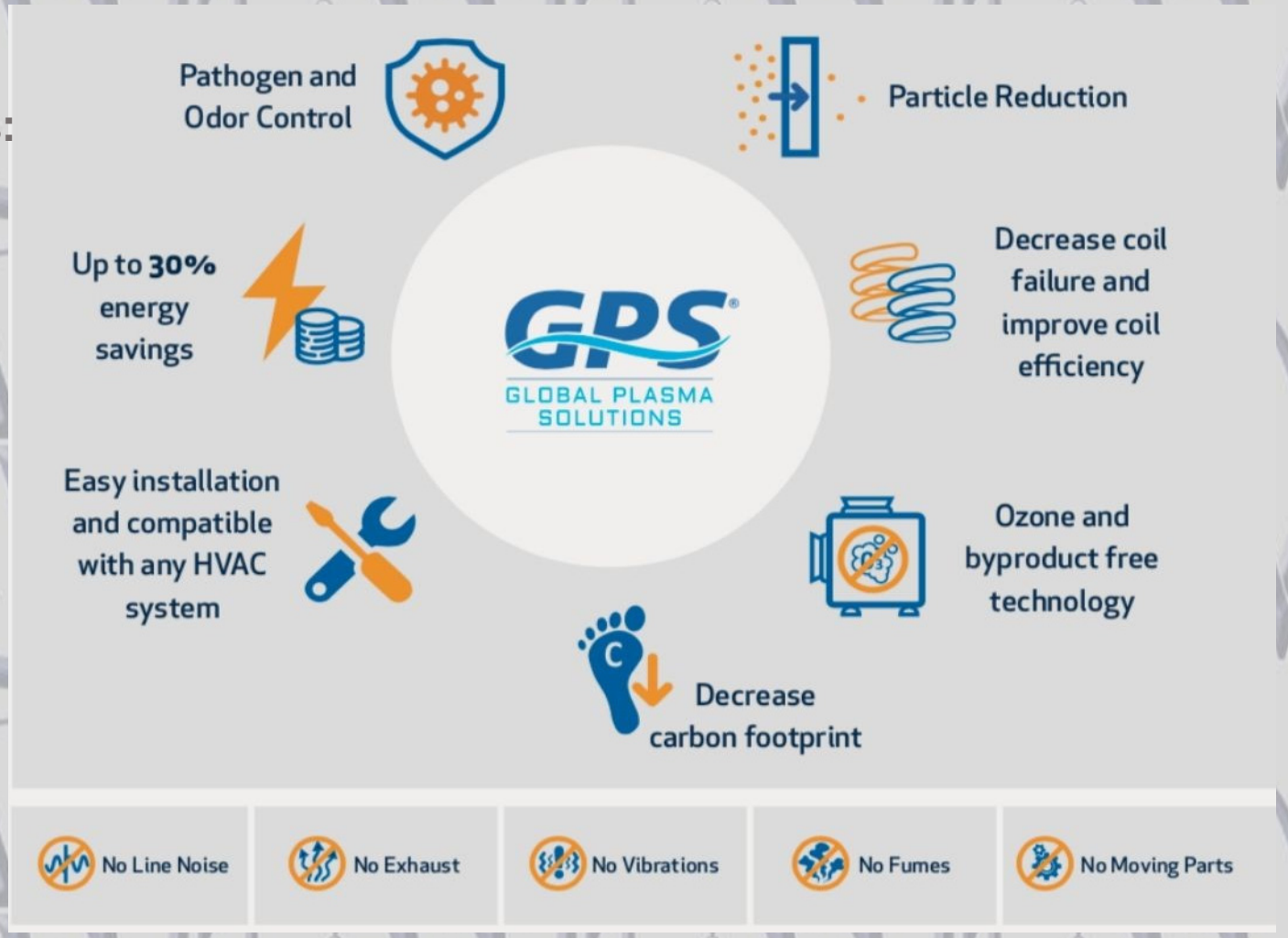
BENEFITS OF AN HVAC PREVENTIVE MAINTENANCE AGREEMENT:

- Increased efficiency and performance
- Prolonged life of equipment
- Improved air quality and healthier environment
- Priority service
- Discount on parts
- Lower labor rates on installations and repairs
- Scheduled maintenance

Clean Energy Series: HVAC

Ways to efficiently enhance existing HVAC system during pandemic

- Increase filtration
- Utilize technology



GEOTHERMAL

Brightcore
BUILDING ENERGY PERFORMANCE™

ZBF
GEOTHERMAL

THE MOST EFFICIENT HVAC SOLUTION IS
RIGHT UNDER YOUR FEET

GEOTHERMAL

Presenters

Dave Hermantin, P.E.
Vice President, Engineering

Zachary Fink
Owner

Brightcore
BUILDING ENERGY PERFORMANCE™

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GEO AS A SERVICE

BROAD FINANCIAL IMPACT

REDUCED UPFRONT OUT OF POCKET CAPITAL COST

Combined impact of incentives and Brightcore Geothermal as a Service

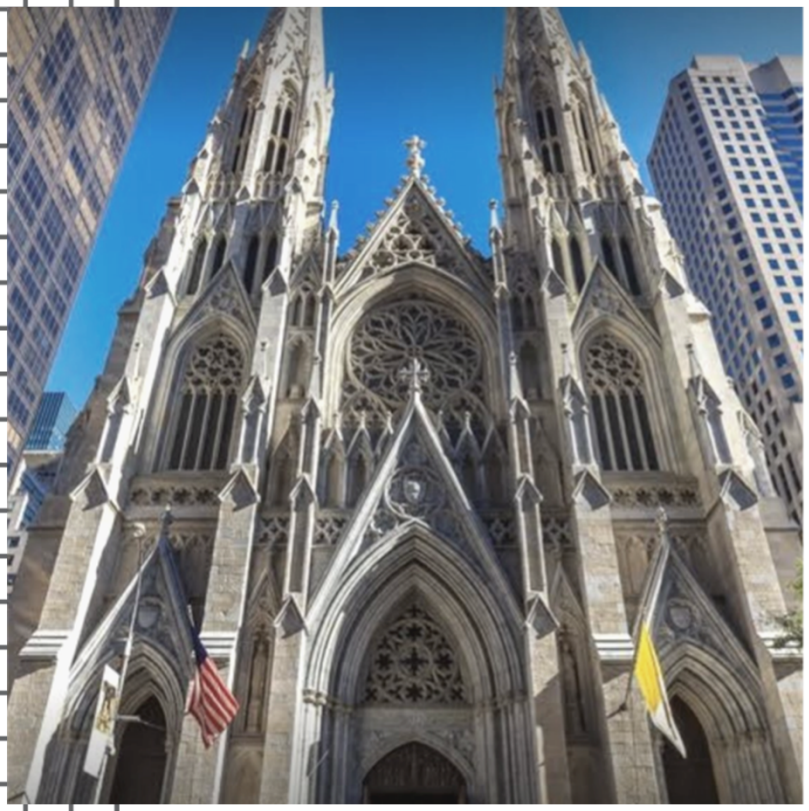
REDUCED ENERGY COSTS

Significant reduction in annual energy costs due to heating/cooling efficiencies

REDUCED MAINTENANCE COSTS

Operational life: 25 years for the heat pump and 50 years for the ground loop

NYC – Experienced Leaders in Geothermal



NYC – Experienced Leaders in Geothermal

127 Apartments

Less then $10/month per apartment for cooling

100% Affordable Housing

Solar Energy 2020

Doug Hertz
President
Sunrise Solar Solutions, LLC

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Sunrise Solar SOLUTIONS

WHO'S GONE SOLAR?

Peekskill Apartments
Apartment Development
69 KW System

POA
Medical Office
25 KW System

Sleepy Hollow Country Club
System installed on four buildings
200 KW System

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Sunrise Solar SOLUTIONS

WHO'S GONE SOLAR?

Temple Israel
Not-For-Profit
56 KW System

Scarborough Manor Coop
System installed on 3 buildings
456 KW System
Largest residential system in NY

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IS SOLAR RIGHT FOR MY PROPERTY?

- Do I have enough roof space
  - Horizontal rather then vertical building
  - 6 stories or less ideal
  - Condition of Roof
- Parking Lot or Garage Top
- Ground Mount

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SOLAR INCENTIVES

- Federal Investment Tax Credit -26%
- 100% Bonus Depreciation
- NY State Incentives
  - NYSERDA Incentives
  - NY Sales Tax exemption
  - NY Property Tax exemption
- New York City
  - NYC Property tax abatement

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Summary of Approaches

- Build, Own & Operate
  - Highest return
  - Great Incentives
  - Financing Options
- PPA Or Operating Lease
  - Great if you don't have a tax appetite
- Lease Your Roof to a Developer
  - Lowest risk
  - Requires at least 20,000 sf of roof space
  - Host a Community Solar System

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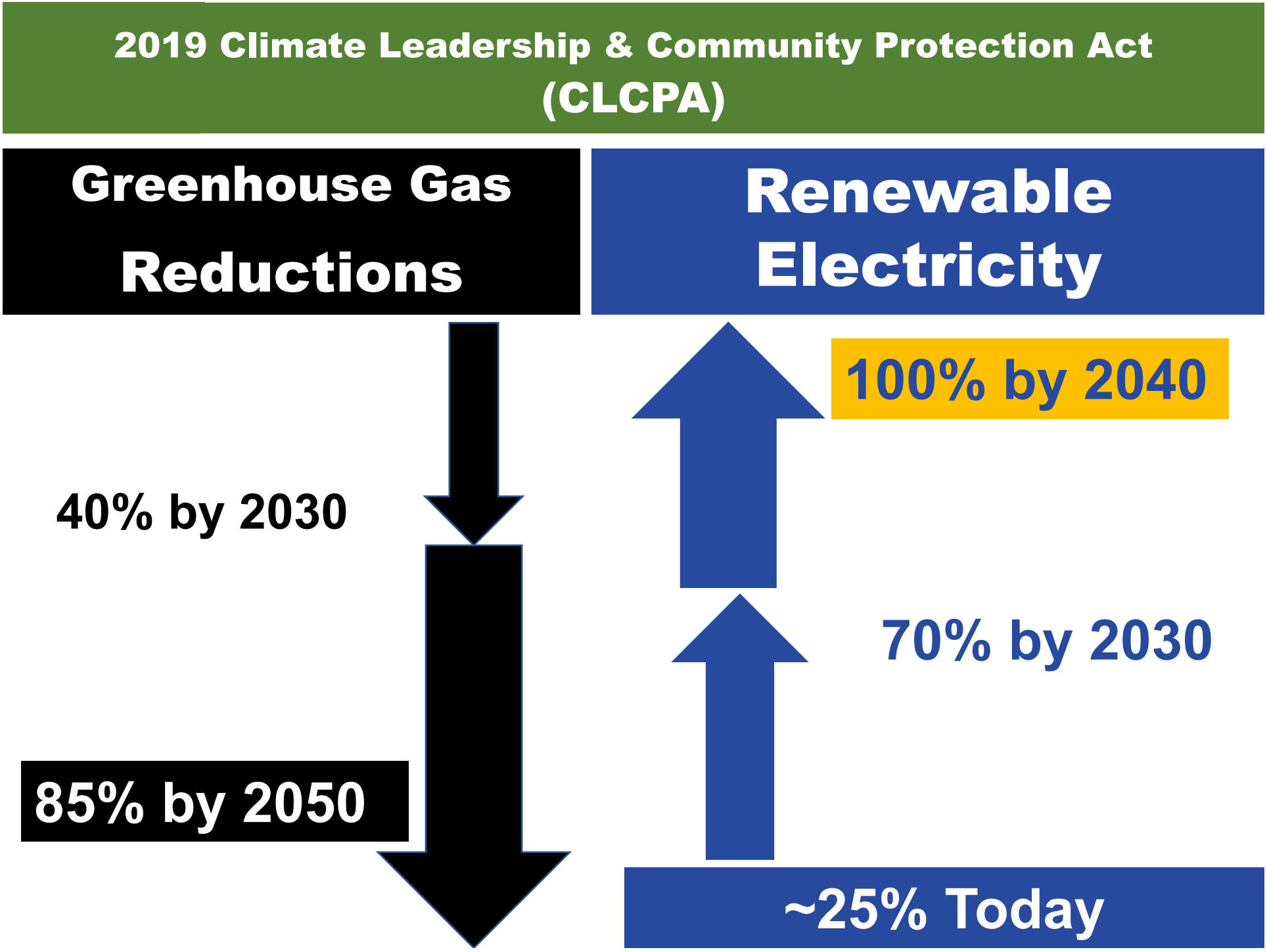
Renewables vs. Fossils

EarthKindEnergy.com/how-much-energy-is-left

2-minute animation video

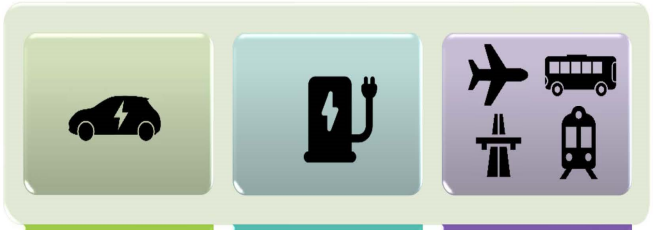

2019 Climate Leadership & Community Protection Act (CLCPA)
Greenhouse Gas Reductions
Renewable Electricity
100% by 2040
40% by 2030
70% by 2030
85% by 2050
~25% Today

New York is committed to 100% clean carbon-free electricity by 2040

most aggressive in the nation

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

NY Clean Transportation



Electric Vehicles

- >800,000 by 2025
- >41,000 today
- $55M Drive Clean Rebate

EV Charging Stations

- 10,000 by 2021
- >3,300 today
- $5M Charge Ready NY Rebate

Transportation

- Currently: ~40% of NYS GHG
- Goal: Reduce NYS GHG 40% by 2030

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Clean Heating and Cooling Technologies

Ground Source Heat Pumps • Air Source Heat Pumps
Solar Thermal • Biomass

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CLCPA by the Numbers, Targets Codified into Law

Carbon neutral economy, mandating at least an 85% reduction in emissions below 1990 levels

40% reduction in emissions by 2030

100% zero-carbon electricity by 2040

70% renewable electricity by 2030

9,000 MW of offshore wind by 2035

6,000 MW of distributed solar by 2025

3,000 MW of energy storage by 2030

185 TBtu on-site energy savings by 2025

https://climate.ny.gov/-/media/CLCPA/Files/2020-06-24-CAC-Meeting-Presentation.pdf

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Distributed Solar & Energy Storage

Distributed Solar

> NY-Sun program continues to support robust adoption of solar, from rooftop to community-scale

> Over 86,000 NY-Sun solar projects, driving over 1,800 MW statewide, plus 1,000 MW in the pipeline

> Since 2012, solar deployment increased 1,700%, with $3.8 billion in private investment leveraged

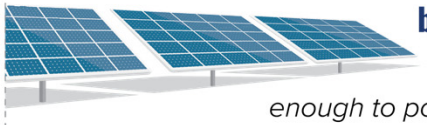
Energy Storage

> Avoid CO_2 emissions; reduce the impact of outages; allow intermittent renewables to be available during peak demand

> Create 30,000 jobs by 2030 in New York

> $400 million market acceleration bridge incentives: available for retail, bulk, standalone, and storage plus solar PV

> Technical assistance: permitting, interconnection, customer acquisition, and financing resources



6,000 MW
of distributed solar
by 2025

enough to power 1 million homes

3,000 MW
of energy storage
by 2030

Up from 1,500 megawatts by 2025

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Building Electrification Must be a Focus

Electric heat pumps deliver **greater efficiency** and **emission reduction** as electricity becomes cleaner

Deployment must **scale aggressively** to provide these benefits

Technology and business model **innovations** will be key to cost reduction

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Sponsored

Reducing Transportation Emissions

Electrification

- Zero emission vehicles (ZEV) must take over new vehicle sales, with growth in charging/fueling access; NY targeting roughly 850,000 ZEV on road by 2025 under ZEV MOU
- ZEV rebates; fast-charging incentives recently approved by DPS; NYPA's "EVolve Program" & $250 million commitment

> Reduced vehicle miles traveled (VMT) through transportation alternatives

> Increased reliance on low-carbon/renewable fuels, particularly for medium and heavy duty

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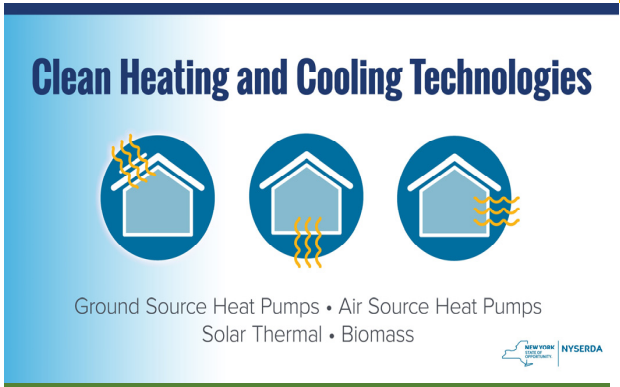
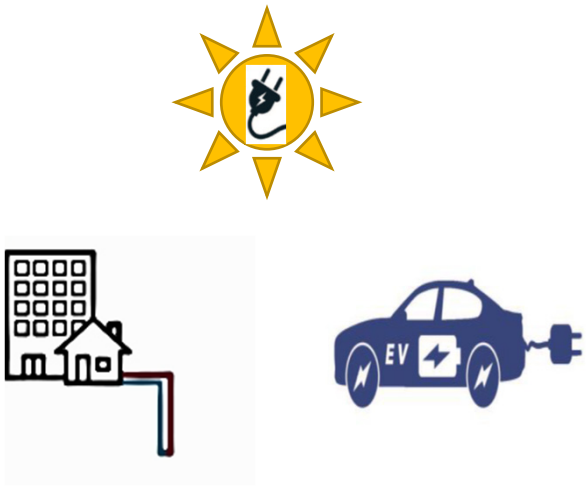
NYS Clean Energy Program

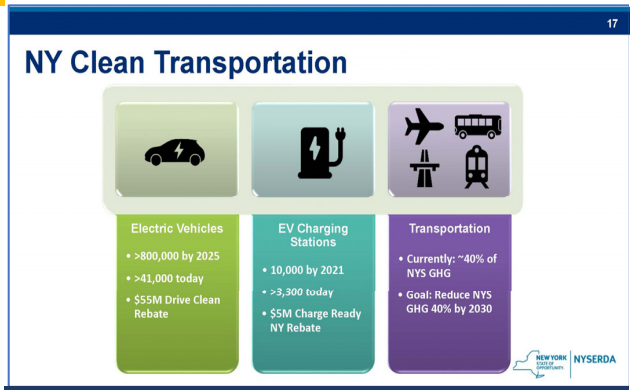
$5.65 Billion Incentives *including*

$573 M



$454 M





$652 M

Financial Savings

Capital & Tax Credits

10%

to

30%

ROI

or

Zero Cash

No Cash Down

10+% Savings

Consulting Sweepstakes

Win an Expert Energy Assessment & Consultation

Value up to $10,000

ONLY Available to BCW Clean Energy Series Attendees

10-35% energy cost reduction &

Clear Path to 100% Clean Energy

1 Entry Per Webinar

Hidden Webpage

EarthKindEnergy.com/Sweepstakes

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