NEW JERSEY
CLEAN ENERGY
ECONOMY
New Jersey is committed to growing our clean energy sector

- Phil Murphy
Governor of NJ

Why choose New Jersey for CLEAN ENERGY?

Unmatched location and infrastructure assets

- Be at the center of the densely-populated, energy-dependent Northeast Corridor
- Enjoy unmatched regional and global connectivity with next-door access to NYC and Philadelphia and ~600 nonstop flight destinations¹
- Take advantage of the largest port on the East Coast and our best-in-class digital infrastructure

Committed to a world-class clean energy economy

- Be a part of our bold political and financial commitment to 100% clean energy and a thriving clean energy economy
- Locate in a State with leading clean energy use and a robust pipeline of clean energy demand
- Join the growing ecosystem of clean energy companies that call NJ home and are leveraging world-class supports in order to grow

Diverse talent to fuel the clean energy economy

- Access the high-skilled and blue-collar workers needed across your entire business, tapping into one of the largest clean energy talent pools in Northeast
- Hire from a truly diverse talent pool and the highest concentration of scientists and engineers in the US
- Tap into a robust talent pipeline, supported by 150+ higher education institutions supporting leading energy R&D

A place for every employee

- Offer employees access to the #1 ranked pre-K-12 education system in the nation
- Provide employees with a choice of commutable city, small town, country, and coastal living
- All this at a fraction of the cost of New York and Philadelphia – and just a short train ride away

¹ Includes Newark Liberty International Airport, Philadelphia International Airport, John F. Kennedy International Airport, and LaGuardia International Airport
UNMATCHED LOCATION AND INFRASTRUCTURE ASSETS

HEART OF THE NORTHEAST CORRIDOR

NEXT TO NYC AND PHILADELPHIA WITH EASY ACCESS TO THE GLOBE

THE #1 AIRPORT SYSTEM IN THE US AND THE #1 PORT ON THE EAST COAST IN THE #1 DIGITALLY-CONNECTED STATE

1 Includes Newark Liberty International Airport, Philadelphia International Airport, John F. Kennedy International Airport, and LaGuardia International Airport
The heart of the Northeast corridor

Day trips by train to Washington DC and Boston

Train times from Newark Penn Station

- Newark ~20 min
- New York ~20 min
- Trenton ~40 min
- Philadelphia ~1.5 hours
- Baltimore ~2 hours
- Washington, DC ~3 hours
- Boston ~4 hours

$2.8 trillion GDP within 150 miles (15% of US)

38 million consumers within 150 miles

NOTE: All train times referenced from Newark Penn Station

1 Includes the GDP and population of counties whose centers are within 150 miles of New Jersey

Source: Moody’s Analytics
Easy access to employees, clients, and customers across the globe

340+ NONSTOP DOMESTIC DESTINATIONS

260+ NONSTOP INTERNATIONAL DESTINATIONS

SOURCE: Diio Mi - Includes Newark Liberty International Airport, Philadelphia International Airport, John F. Kennedy International Airport, and LaGuardia International Airport
Importing and exporting goods could not be easier for your business

- **Busiest airport system**\(^1\) in the US
- **#1 largest port** on the East Coast (Port of Newark)
- **5 strategically located Foreign Trade Zones** throughout the State

**SOURCE:** 2018 Port Performance Report, Department of Transportation; State of NJ Business Portal, Airports International Council (ACI)

\(^1\) Includes Newark Liberty International Airport, Atlantic City International Airport, JFK International Airport, LaGuardia Airport and Philadelphia International Airport
Best-in-class Digital Infrastructure

#1 in % of population with access to wired broadband of 25 mbps or faster (99.1%)

#2 in average download speed (59.4 mbps)

#2 in % of population with access to fiber-optic internet (66.2%)

SOURCE: Broadbandnow.com, retrieved in June 2019; #1 average download speed in Maryland (~60.3 mbps) and #1 in % access to fiber is Rhode Island (~85%)
COMMITTED TO A WORLD-CLASS CLEAN ENERGY ECONOMY

A DEEP POLITICAL AND FINANCIAL COMMITMENT TO THE CLEAN ENERGY ECONOMY

UNMATCHED ACCESS TO A PIPELINE OF CURRENT AND FUTURE CLEAN ENERGY CONSUMERS

HOME TO ESTABLISHED AND GROWING CLEAN ENERGY COMPANIES AND A PERFECT ECOSYSTEM FOR INNOVATION
NJ’s commitment to clean energy

NJ has made bold commitments to lead in clean energy ...

100%
clean energy use by 2050

1 of 6
states with an energy storage target over the next decade (2,000 MW by 2030)

...and is making the financial investments needed to follow through

$7+ billion
in direct public expenditures via NJ Clean Energy Program since 2001

$9+ billion
in public and private solar investment in the State ($700+ million in 2018)

$70+ million
of additional annual funding through RGGI to support more innovative clean energy programs

To get New Jersey right, we must both grow our economy and make it fair. Investing in clean energy does both.

- Phil Murphy
Governor of NJ

NJ has long been a leader in clean energy

23%+ clean energy by 2021

The Solar Act

Promotes Offshore Wind Energy

Sets 100% clean energy commitment

Draft energy Master Plan

2012 2015 2018 2019

Energy Master Plan Update
NJ joins the US Climate Alliance Upholding the Paris Climate Accord
Clean Energy Act
35% clean energy by 2025
50% clean energy by 2030

NJ announces Partnership to Plug-In, a first-of-its kind partnership to register 300,000 electric vehicles by 2025

SOURCE: New Jersey’s Department of Environmental Protection, “New Jersey’s Clean Energy Picture”
We are a clean energy State with the investments in place to show for it

310+ Electric Vehicle charging stations

840+ Electric Vehicle charging outlets

8 Operational energy storage projects

40% of existing large-scale battery storage power capacity lies in the PJM regional transmission organization

300+ Operating grid-level solar installations

We have a well-established customer base and the #1 solar capacity in the Northeast

Number of homes that could be powered by installed solar capacity in the Northeast

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Homes</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>460K</td>
<td>#1</td>
</tr>
<tr>
<td>Massachusetts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td></td>
<td></td>
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<tr>
<td>Maine</td>
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</tr>
</tbody>
</table>

~14% NJ housing units

1 Includes all occupied housing units minus mobile homes

NJ has a strong pipeline of corporate clean energy demand

#3 ranking in ease with which companies can procure renewable energy in the US

Ardagh Group

June 2019 – Develops 5.5 MW net-metered solar project to provide energy for its glass manufacturing operations

DSM

January 2019 – Announces expansion of solar farm by 20.2 MW to provide energy for its manufacturing facilities, doubling its current capacity

Six Flags

June 2019 - Develops 23.5 MW for Six Flags NJ location, enabling the theme park to be nearly completely operated by solar power

Nestlé

February 2018 – Leverages wind power in partnership with EDP Renewables in step toward 100% renewable electricity goal

QTS

May 2019 – Signs agreement to power data center with 100% wind power in Piscataway, NJ

BPU

February 2017 – State Board of Public Utilities approves plans to invest $8M to enhance energy efficiency on two state buildings

Amazon

September 2018 - Installs rooftop solar panels at Edison location, aimed at producing 20% of energy needs

Sun Chemical

February 2017 - Signs a solar power purchase agreement (PPA) to cut electricity costs and improve efficiency at production facility in NJ

Cary

April 2019 – Adds a solar array at a shared manufacturing facility in Manalapan, NJ

SOURCE: Insider NJ, NJ Spotlight, Yahoo Finance, Corporate Clean Energy Index

After a landmark year of progress on policies that support jobs in solar, offshore wind, and energy efficiency, New Jersey’s clean energy businesses are reaping the rewards of a stronger economy.

- Noah Dubin
Environmental Entrepreneurs
Our bold vision has led to a growing clean energy economy in the State

### New Jersey

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Hydro</th>
<th>Solar</th>
<th>Wind</th>
<th>Geothermal &amp; Biomass</th>
</tr>
</thead>
</table>

700+ Clean energy companies¹ in NJ

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**Notes:**
- Companies on map reflect a sample of companies HQ in New Jersey from Capital IQ.
- ¹ Based on number of firms - defined as an organization consisting of one or more domestic establishments in the same state and industry that were specified under common ownership or control.

**Source:** Capital IQ, 2016 Statistics of U.S. Businesses (SUSB)
With many clean energy companies doubling down in NJ

Power generation company
- Expands in South Plainfield, NJ to create 150 clean energy jobs
- Establishes US office in Atlantic City, NJ
- Proposes a $1 billion utility-scale solar investment in NJ

Solar energy equipment supplier
- Opens 30,000 sq. foot facility in East Rutherford, NJ
- Expands in South Plainfield, NJ to create 150 clean energy jobs

Global offshore wind company
- Establishes US office in Atlantic City, NJ
- Opens its North American headquarters in Jersey City, NJ

Natural gas and clean energy provider
- Announces construction of 3 MW ground-mount solar project
- Announces investment of $4 billion to improve NJ energy efficiency, electric vehicle infrastructure and energy storage

Leading renewable energy company
- Opens 30,000 sq. foot facility in East Rutherford, NJ

SOURCE: Company press releases
We have the supports needed to help clean energy companies thrive

**ORCHESTRATED POLICIES**
- Draft 2050 Energy Masterplan
- New Jersey’s clean energy program

**INNOVATIVE FINANCING**
- Green Bank
- Regional Greenhouse Gas Initiative
- Infrastructure Bank

**SUPPORTIVE INSTITUTIONS AND PROGRAMS**
- Clean energy innovation center
- Rutgers New Jersey Agricultural Experiment Station
- NjMEP

**PUBLIC AND PRIVATE COLLABORATIONS**
- Partnership to Plug-In
- NJ Clean Energy Resource Network
- PSEG

$4.1B investment in NJ clean energy infrastructure
Who’s here: Eos Energy Storage LLC

Eos, founded in 2008, is headquartered in Edison, New Jersey.

Eos Energy Storage LLC develops and manufactures energy storage solutions, offering DC battery systems designed for the grid-scale energy storage market, with annual sales of $7.7 M.\(^1\)

As of 2016, Eos Energy Storage had created partnerships with energy companies, including Toshiba and Siemens, NRG Energy, and Con Edison.

Eos Energy Storage is deploying its products in several markets outside of USA, including Brazil.

Announced two new projects deploying the company’s Aurora 2.0 battery system on both coasts of the United States.

Eos Energy Storage announced the installation and commissioning of a 250 KW battery system at the wastewater treatment plant in Caldwell, New Jersey.

\(^1\) Estimated by Factiva for year 2018.

New Jersey represents a vibrant and growing market for energy technologies and renewable energy development. We decided to headquarter Eos in Edison because we wanted to be part of an ecosystem where utilities, energy technology companies, and state agencies are working together to improve grid resiliency, reduce greenhouse gas emissions, and lower electricity costs for end-users.

- Michael Oster
Eos Energy Storage CEO

SOURCE: Eos Energy Storage company website, New Jersey Economic Development Authority website, Holtec International website, Factiva, Press articles
Who’s here: Panasonic, solar energy solutions provider settled in Newark

Panasonic is active in several industries including sustainable energy, and has its principal North American subsidiary in Newark, NJ.

Offers battery storage and solar energy solutions and is regarded as a market leader in the solar panel industry.

Collaborated with SolarEdge to offer smart module for the US residential market in 2018.

The more I studied, the more I learned and the more I watched the development and the process that this city [Newark] was making, the more convinced I was that this would be the home for us to transform ourselves into the world's leading green global company.

- Joseph Taylor
  Panasonic Chief Executive
Among the largest clean energy workforces in the Northeast

7th most racially and ethnically diverse state in US

150+ higher education institutions in the region

LARGE AND ACCESSIBLE TALENT POOL

GLOBALLY AND RACIALLY DIVERSE POPULATION

PIPELINE OF TOP TALENT

DIVERSE TALENT TO FUEL THE CLEAN ENERGY ECONOMY

SOURCE: US Census Bureau, WalletHub, The Integrated Postsecondary Education Data System (IPEDS)
A large, accessible, and talented workforce

Large and accessible talent pool...

~4.5M Total workforce

#1 state by population density

~1,200 residents per square mile

...across a range of talent needs

40% with bachelor’s degree+ (#4 in the US)

~2.5M high-skilled population¹

~1.7M middle-skilled population²

SOURCE: Workers defined as civilian labor force from Bureau of Labor Statistics (April 2019); population density from US Census Bureau (2018 estimates) and TIGER database for land area (2018); educational data from American Community Survey (2017 1-year estimates)

¹ Bachelor’s degree or higher
² High school diploma holders without a post-secondary degree

We intend to combine our unique blend of German engineering expertise with our local team’s know-how in energy policy and community engagements to advance [New Jersey’s] goals for clean energy.

- Holger Grubel
  Head of Offshore Wind Portfolio Development
  EnBW
### Ideal mix of high-skilled and middle-skilled talent available

**Solar Power Compatible Occupations, Ths.**

<table>
<thead>
<tr>
<th>State</th>
<th>High-Skilled Workers</th>
<th>Middle-Skilled Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>337K</td>
<td></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>265K</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>174K</td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>172K</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>117K</td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>75K</td>
<td></td>
</tr>
<tr>
<td>New Hampshire</td>
<td>36K</td>
<td></td>
</tr>
<tr>
<td>Maine</td>
<td>23K</td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>19K</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>17K</td>
<td></td>
</tr>
</tbody>
</table>

162% growth in NJ solar panel installer jobs (2013-18); 3rd fastest growing job in the state

76K high-skilled workers

96K middle-skilled workers

A STEM-focused workforce

DIVERSE TALENT TO FUEL THE CLEAN ENERGY ECONOMY

A workforce ready for the future

22% of graduates are in STEM\(^1\) disciplines

4\(^{\text{th}}\) highest share of STEM graduates in the country

1\(^{\text{st}}\) in scientists and engineers per square mile

1 STEM includes Computer and Information Sciences and Support Services, Engineering, Engineering Technologies and Engineering-Related Fields, Biological and Biomedical Sciences, Mathematics and Statistics, Physical Sciences, Science Technologies/Technicians

SOURCE: The Integrated Postsecondary Education Data System (IPEDS), National Science Foundation
Diverse talent needed to compete in a globally diverse world

WHERE DIVERSITY THRIVES...

#1

MOST ETHNICALLY DIVERSE CITY IN THE US (JERSEY CITY)

OVERALL RACIAL AND ETHNIC DIVERSITY

#7

31%

SPEAK A LANGUAGE OTHER THAN ENGLISH AT HOME

#1

FOREIGN-BORN RESIDENTS HAVE A BACHELOR’S DEGREE OR HIGHER

40%1

IN K-12 STUDENTS ENROLLED IN FOREIGN LANGUAGE CLASSES

4th

IN THE NATION FOR LINGUISTIC DIVERSITY

...AND INTERNATIONAL RESIDENTS ARE WELCOME (~2 MILLION OF THEM!)

1 United States average is 32%

SOURCE: WalletHub, American Community Survey, IPUMS, American Councils
Access to 150+ premier higher education institutions

1 New Jersey region includes New Jersey state, New York-Newark-Jersey City, NY-NJ-PA MSA and Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA
2 Includes universities under Carnegie classification: Doctoral Universities: Very High Research Activity, Doctoral Universities: High Research Activity
3 Includes Princeton, Columbia University and University of Pennsylvania

$6.6 billion R&D expenditures\(^1\)

150+ institutions in the region\(^1\)

25 Doctoral universities\(^ {1,2} \)

#1 University in the country and 3 of top 10\(^ {1,3} \)

SOURCE: Carnegie Classification of Higher Education Institutions, Higher Education Research and Development Survey (National Science Foundation), The Integrated Postsecondary Education Data System (IPEDS), US News
We are leading clean energy research through efforts like Rutgers University’s Center for Ocean Observing Leadership (RU COOL).

New Jersey is perfectly situated to lead in offshore wind development ... At Rutgers, we are committed to leveraging our research capabilities.

- S. David Kimball
Interim VP for Research and Economic Development at Rutgers

Rutgers University is a premiere institution that can provide us with ongoing research that will help propel New Jersey.

- Thomas Brostrøm
CEO, Ørsted North America

RU COOL provides the most comprehensive ocean and atmospheric data supporting business and local-state-federal agencies to ensure smart and sustainable use of the coastal waters in the Mid-Atlantic.
A PLACE FOR EVERY EMPLOYEE

TRANSLIT-RICH, DIVERSE NEIGHBORHOODS

Newark

BUSTLING, GROWING CITIES

Jersey City

TRANSIT-RICH, DIVERSE NEIGHBORHOODS

Montclair

BUSTLING, GROWING CITIES

Hoboken

ACCESSIBLE, SMALL TOWNS

Collingswood

COASTAL ENCLAVES

Ocean City

COASTAL ENCLAVES

Asbury Park

ACCESSIBLE, SMALL TOWNS

Princeton
Montclair
A safe and vibrant suburb with incredible schools, world-class dining options, and direct access to New York City

17 miles from Midtown Manhattan

86% bachelor’s degree or higher

12.5 student-teacher ratios

7 Parks and nature reserves

A DISTINCTIVE COMMUNITY

Downtown Montclair

Brookdale Park

Top 20 suburb in America to raise a family

Parks include Anderson Park, Yantacaw Brook Park, the Bonsal Nature Reserve, Mountainside Park, the Presby Memorial Iris Gardens, and parts of Mills Reservation and Brookdale Park.

1 Refers to Upper Montclair specifically.

SOURCE: TownFacts, Niche, Township of Montclair
A PLACE FOR EVERY EMPLOYEE

The #1 Pre-K-12 education system in the country

1 ranked in Pre-K-12 education¹

Compared to...

9 PA
8 NY
41 TX
28 CA

2 of the top 30 school districts

3 of the top 20 high schools in the US

¹ States are graded and ranked in three categories: Chance for Success (January), School Finance (June), and K-12 Achievement (September).

If your income in Manhattan is...

\[ \sim \$100,000 \]

after taxes

Moving to Newark would get you...

\[ \sim \$200,000 \]

of purchasing power

Typical savings moving from Manhattan to Newark
% savings vs. original dollar spend

- **Housing**: 70% savings
- **Groceries**: 24% savings
- **Transportation**: 13% savings
- **Utilities**: 10% savings
- **Healthcare**: 10% savings

Access to New York City and all of its amenities at a fraction of the cost

Easy access to New York City...

Weekday commute time to Midtown Manhattan (Penn Station), minutes

<table>
<thead>
<tr>
<th>Destination</th>
<th>Nearby in NJ</th>
<th>Nearby in NY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montclair</td>
<td>~1 hour</td>
<td></td>
</tr>
<tr>
<td>Newark</td>
<td>18m</td>
<td></td>
</tr>
<tr>
<td>Newark Airport</td>
<td>26m</td>
<td></td>
</tr>
<tr>
<td>Hoboken</td>
<td>20m</td>
<td></td>
</tr>
<tr>
<td>Jersey City</td>
<td>26m</td>
<td></td>
</tr>
<tr>
<td>Upper West Side</td>
<td>19m</td>
<td></td>
</tr>
<tr>
<td>Upper East Side</td>
<td>20m</td>
<td></td>
</tr>
<tr>
<td>Downtown Brooklyn</td>
<td>28m</td>
<td></td>
</tr>
</tbody>
</table>

...at New Jersey prices

Median market rent ($ per month, 2019)

<table>
<thead>
<tr>
<th>Destination</th>
<th>Median Market Rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midtown Manhattan</td>
<td>$4,637</td>
</tr>
<tr>
<td>Upper West Side</td>
<td>$4,249</td>
</tr>
<tr>
<td>Upper East Side</td>
<td>$4,081</td>
</tr>
<tr>
<td>Downtown Brooklyn</td>
<td>$3,030</td>
</tr>
<tr>
<td>Hoboken</td>
<td>$2,817</td>
</tr>
<tr>
<td>Montclair</td>
<td>$2,457</td>
</tr>
<tr>
<td>Jersey City</td>
<td>$2,087</td>
</tr>
<tr>
<td>Newark</td>
<td>$1,533</td>
</tr>
</tbody>
</table>

SOURCE: Google Maps estimates via public transportation at 8:00 am on Monday morning; in cases where time range is provided, estimate uses average of low and high range; rent data from Zillow Rent Index (April 2019); not standardized by square feet or number of bedrooms given sample size (not able to get more detailed estimates for Montclair or Newark)
Endless opportunities for leisure

130 miles of coastline
#1 beach town in America
9,000 farms
55 Historical sites

400+ Lakes, pond & reservoirs
216 golf courses
930 miles of hiking
4 Zoos and botanical gardens

28 State parks
16 theme parks
144 Museums

3 ski mountains
10 sports stadiums

1 America’s Happiest Seaside Town

SOURCE: Stockton University, State of New Jersey Department of Environment Protection, GolfMax, FunNewJersey.com, Coastal Living, Department of State, Division of Travel and Tourism, State of New Jersey, New York-New Jersey Trail Conference, JerseyFresh, Institute of Museum and Library Services
A progressive agenda that helps attract diverse, highly-skilled talent

Governor Murphy Signs Executive Order Creating Future of Work Task Force
October 5, 2018, 3:09 pm

TRENTON — Governor Phil Murphy today signed an Executive Order establishing the Future of Work Task Force, charged with studying how technological innovation will impact the development of jobs and New Jersey’s economy. He also announced that the task force will be chaired by Chief Innovation Officer Dr. Beth Simone Noveck. The Governor previewed this task force in the Economic Development Strategic Plan he unveiled on Monday.

New Jersey advances plans for 330,000 zero-emission vehicles by 2025

In his first bill signing, Murphy restores funding for Planned Parenthood
By KATHERINE LANDERGAN | 02/21/2018 01:06 PM EST

Governor Murphy Signs Legislation to Make Student Loans More Affordable
04/25/2019

Two New Laws Help Borrowers of N.JCLASS Loans Manage their Student Debt and Repair their Credit Scores
TRENTON — Governor Murphy today signed two pieces of legislation to assist student loan borrowers who are struggling with repayment.

choose: newjersey NJEDA
A true partner for your business with supports to help at every stage

**GET STARTED**
Targeted financing programs for young companies

**GET ESTABLISHED**
Innovative supports for growth companies

**GROW**
Venture funding and loan programs to help companies scale

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“The support we’ve received from the State has not only helped us grow, but has enabled us to enhance our platform, thereby helping more advisors and investors.”

*John Michel*
CEO, CircleBlack

“The NJEDA has been instrumental in supporting our growth, and we are confident that our participation in NJ Ignite will allow us to draw new tenants to Indiegrove.”

*Zahra Amanpour*
Founder, Indiegrove

SOURCE: NJEDA press releases and announcements
We’d love to connect with you!

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