

NAIOP New Jersey Comments on the Draft Energy Master Plan August 25, 2011

On behalf of the 540 members of the New Jersey Chapter of NAIOP, the commercial real estate development association, we appreciate the opportunity to submit comments on the Draft Energy Master Plan (EMP). These comments are the result of months of work by NAIOP New Jersey's Energy Master Plan Task Force. We hope that the suggestions and recommendations offered herein will assist the Christie Administration in developing and implementing rational, cost-effective and workable energy policies that reduce overall energy usage and our carbon footprint while enabling New Jersey to reap the economic benefits of being a leader in the renewable and sustainable energy industry.

The final EMP must:

- Encourage and incentivize improved energy efficiencies in existing nonresidential buildings.
- Provide additional generation capacity to ensure the economic viability of our state.
- Increase the capacity and reliability of the grid for current and future users.
- Incentivize new infrastructure where it is needed and makes the most sense.
- Employ pilot programs to test methods and measure results in order to determine what energy efficiency programs will produce the most meaningful results before regulations are developed and mandates are enforced.
- Continue to encourage a robust renewable energy industry.
- Allow lenders to feel comfortable about the long-term prospects of solar investments.

The following comments address areas of primary interest to the commercial and industrial real estate sector.

The EMP must focus more on the achievement of energy efficiency in existing commercial and industrial (nonresidential) buildings.

Very little new nonresidential construction can be expected for the foreseeable future.

Cushman and Wakefield's Second Quarter 2011 Report notes 183,285,833 square feet of existing office space in New Jersey, with just 586,057 square feet under construction, and 606,568,834 square feet of existing industrial space, and just 916,551 square feet under construction. Therefore, much more can be gained in the short term by achieving even small increases in efficiency in existing buildings. The EMP should focus more on retrofits, modernization and upgrades for existing buildings, and caps should be eliminated on incentives for efficiency improvements such as lighting.

- Even a 5% to 10% annual adoption of energy efficiency measures would affect approximately 34,000,000 to 68,000,000 square feet of commercial space. This is many, many times more space using less energy on an annual basis than would be affected by improvements in new construction.
- New construction is already being built more efficient than existing building stock, especially over buildings from 7-10 years of age.

- There are a number of programs available, but the market knowledge of the programs is low and they aren't always the simplest programs to implement.

Through the New Jersey Clean Energy Program, there are a number of programs that provide commercial and industrial owners with incentives to enhance the operating efficiency of their real estate, which are primarily funded by the New Jersey Societal Benefits Charges. The programs pertinent to owners of existing buildings include: NJ Smart Start – Direct Install / New Construction and Retrofits / Pay for Performance Program. Although these programs are beneficial, the standards established to be eligible for reimbursements/funding from such programs are too high.

The EMP should re-evaluate the thresholds and either lower standards for these programs, or create a sliding scale where commercial and industrial owners would be entitled to a percentage of the costs based on the amount of energy savings realized in the event that the established goal is not attained. Such modifications should be incorporated into these programs. NAIOP New Jersey is willing to work with the State to establish more reasonable standards, and educate commercial and industrial building owners on program modifications in an effort to maximize participation in order to achieve greater energy efficiency throughout the commercial and industrial sector.

Additionally, owners of commercial and industrial buildings are significant contributors (through New Jersey Societal Benefits Charges) to the funding of NJ Smart Start Programs, yet many (particularly in the office sector) do not benefit from or participate in such programs because the capital outlay is too high, especially in today's economic environment. That being said, the State should consider allowing proactive owners who are eager to invest in energy efficiency upgrades to access a percentage of money they have already paid in New Jersey Societal Benefits Charges to fund energy efficiency upgrades (e.g., HVAC, Energy Management Systems, etc.). Once again, NAIOP New Jersey is willing to work with the State to educate the commercial and industrial sector.

NAIOP New Jersey supports the creation of EECs (Energy Efficiency Certificates). This new market, modeled after the SREC program, would stimulate much-needed investment in energy conservation and efficiency measures in commercial and industrial buildings. In Governor Christie's conditional veto of A-2529, he calls for the creation of the EEC program. This program would save energy, improve air quality and create jobs.

Virtual and Community Net Metering

We recommend that the Board of Public Utilities (BPU) advocate legislative action to approve Virtual Net Metering (VNM) to allow multiple tenants in office/flex buildings and industrial parks to invest in solar and take advantage of economies of scale. Virtual Net Metering would be a great step towards giving businesses in multi-tenant buildings an option to purchase renewable energy and achieve savings on their electric expenses. These tend to be small businesses, so their electrical expenses are likely a large percentage of their overall costs of doing business. Small businesses generally pay a much higher rate for electricity, so the net benefit of purchasing electricity generated on site would be even greater.

Currently, to capture net metering credits, there must be a one-to-one relationship between the solar generation system's meter and the meter associated with the offsetting electricity load. Moreover, the two needed to be co-located and tied to the same electric service account. These restrictions are beginning to subside with the advent of Virtual Net Metering, an electric tariff that allows for the net-metering credits from a single solar generating system to be distributed among multiple electric service accounts.

While VNM is a relatively new concept, 43 states and the District of Columbia currently allow net metering. Massachusetts has implemented a “neighborhood net metering program” which allows groups of at least 10 “neighbors” to spread the net metering credits from a single PV system across the electric accounts of the participating neighbors. Rhode Island offers VNM for certain customer classes such as local and state governments. California has taken a similar approach, piloting the concept with a select group of customers, namely the multifamily low-income segment.

A New Jersey building owner is currently working on a solar installation for a 133,000 SF building with 14 tenants. It is cost prohibitive to actually tie into each tenant’s meter to net meter each of the 14 spaces. That situation would create essentially 14 separate solar PV systems with inverters, wiring and conduit runs. If the owner could apply a single system virtually and “supply” the energy to the tenants in the building, he could very easily provide a benefit to the small businesses in this example.

We recommend that the BPU develop and implement pilot projects to acquire the data needed to determine best practices to accomplish Community Net Metering across large industrial parks and mixed-use developments, as well as residential.

NAIOP agrees with the draft EMP’s conclusions that the concept of community solar would help drive down the cost of solar. Community Solar, as has been described in the BPU’s order creating the concept, allows those who cannot afford to install individual solar projects to essentially aggregate to allow the use of one centrally located solar project. This allows multiple investors in a large solar project. On large commercial buildings (such as warehouses and shopping centers), or projects that have multiple users, the concept of net metering is not always sufficient to incentivize the construction of solar. As stated previously, one solution is to permit Virtual Net Metering, which would allow multiple users on the same property (e.g. commercial tenants) to take advantage of a large on-site solar project. The concept of Community Solar essentially is the next step in expanding the concept of allowing the aggregation of customers beyond the four corners of a property to take advantage of large, centrally located solar projects.

Expansion of the State’s policy and focus on Community Solar to the broadest array of participants will provide additional incentives to businesses to undertake the large-scale solar projects that will support the State’s goal of advancing solar development while cutting costs. In order to effectuate such a policy, it may be necessary to provide regulatory clarity or, in certain cases, legislative authority to allow for Community Solar to be beneficial to the widest community of beneficiaries.

In order to provide for the widest array of Community Solar opportunities, NAIOP New Jersey strongly suggests that the State undertake a review of the relevant statutes and regulations that govern or impact Community Solar projects and identify opportunities to foster the type of service sharing described above. There also needs to be uniformity in the law governing contracting with public entities so that the process is streamlined, and affords the maximum amount of coverage between different types of governmental entities. Government procedures, particularly contracting regulations, can differ greatly depending on whether the entity is a municipality, a school district, a fire district or an authority. These differences also impede the development of Community Solar agreements.

Accordingly, we recommend that the BPU, in conjunction with Department of Community Affairs, the Department of Education and the Division of Law, undertake a complete review of its statutes and implementing regulations to ensure that Community Solar projects can be applied uniformly to all government entities in the most efficient manner possible. NAIOP New Jersey believes that such an exercise would result in regulatory changes in all applicable department regulations that affect solar agreements to make them consistent and avoid conflict. We recognize that in some cases a legislative change may be needed to create such uniformity. We believe that this process can result in legislative

proposals that the New Jersey Legislature will be eager to embrace in order to encourage the continued development of Community Solar agreements by avoiding conflicts of law and related unnecessary red tape.

Pilot Projects

Certain energy policies should not be implemented without pilots to determine actual worth and best practices. “Evidence-based policy making” is often lacking in New Jersey. With long payback periods, developers and tenants are entitled to scientific evidence (proven via pilot projects) that changes, designs, upgrades and/or equipment are necessary and meaningful, and would provide a reasonable return on investment.

One of the more valuable “evidence-based” policy initiatives was conducted by the City of Chicago from 2001 to 2003, called the “Green Bungalow Initiative”. The bungalow is one of Chicago’s predominant residential building types in its neighborhoods, with approximately 80,000 units having been built from 1900 through 1940. The City of Chicago undertook a design and renovation process which focused on the sustainability of products used in the renovation and, most importantly, on the actual operating results of four different energy efficiency techniques deployed in four essentially identical residences. The results were analyzed, recommendations were made for incentive programs and, after more data and analysis, changes in building regulations were incorporated. Through this “pilot” process of “investigate/create options/measure results/incentivize top performers/then regulate”, subsidies and incentives can be: (a) targeted to measure new technologies or methods at a focused scale up front; (b) transitioned to a larger scale, but narrower range of technologies/methods in an intermediate phase; and (c) reduced or eliminated, once the technologies/methods have “matured” within the market cycle, and then the method can work its way into regulations and/or codes.

The Green Bungalow Initiative has specific application to energy efficiency measures within New Jersey for a particular residential product type that has proliferated in the urban areas of Northern New Jersey: the multi-story, multifamily, garage-front dwelling often referred to (in the pejorative) as the “Bayonne Box”. Since these dwelling units are occupied by low-to-moderate income families, such a pilot could have a significant impact on the utility/occupancy costs of some of the most economically “at-risk” residents of the state.

The Green Bungalow Initiative could also serve as a model for pilot studies in the following areas:

1. Community Solar/Virtual Net Metering: community solar started at a relatively small scale in California and Massachusetts, often integrated with affordable housing projects. In New Jersey, pilot studies could be undertaken to determine the effectiveness of community solar in: (a) residential and commercial projects consuming renewable power generated from landfill locations; (b) multi-occupant warehouse distribution facilities with large roofs conducive to large scale, cost-efficient solar generation; and (c) municipal power purchase agreements (PPAs), to allow budget-constrained municipalities to secure a long-term hedge against electricity cost increases.
2. Battery Storage Technology: many industry experts believe we are “12 to 18 months away” from commercial-scale, relatively inexpensive battery storage systems for renewable energy; others are not so confident. In any event, since New Jersey has established itself as the #2 state in the nation for solar generation, it should seek to establish a leadership position in the use of battery technology as well. One of the most consistent “knocks” against the use of solar energy is the intermittent nature of solar generation. Efficient generation coupled with secure storage would

establish renewable energy in New Jersey as a reliable hedge against future energy cost increases, and would be an important economic development tool for the state.

3. Firm Power: as a “bridge” to that time when commercial scale batteries can be considered cost-efficient, the use of natural gas generators to provide “firm power” and create a more reliable energy source for the utility grid could be investigated in a pilot program. One of the more applicable product sectors might be data centers, which are typically located in North Jersey, in proximity to the financial firms located in New York City, and are significant power consumers.
4. Distributed Generation: items #2 and #3 above are some of the components of a successful distributed generation system, but there are many more. An effectively designed and operating distributed generation system would reduce the demand for additional large-scale utility power plants, the siting and approvals for which are among the most difficult land approvals to secure within the state. Distributed generation would reduce New Jersey’s reliance on out-of-state sources for power, a critical economic development tool which will keep energy costs more controllable for the businesses and residents of New Jersey.

Increased Capacity & Infrastructure Improvements

In addition to improved efficiencies, increased energy production capacity must be a primary goal of the EMP because there has been a dearth of new utility-company-grade power plant development in New Jersey for at least the past 10 years. Our state’s grid reliability is a foremost consideration in retaining and attracting industry and should, therefore, be a primary focus of the EMP. To this end, clean central station generation plants (nuclear) should be a priority, as they have the potential to provide reliable, low-cost electricity, and the potential to replace coal-fired and older inefficient facilities. New Jersey requires a diversity of electricity supplies to complement clean central plan generated electricity, such as natural gas-fired combined-cycle (co-generation) central plant generation. In the interests of fuel source diversity, it is desirable that offshore Liquid Natural Gas facility projects be developed. Recent announcements of simple cycle generation plants are a welcome addition to our power generation capacity. Because of their inherent inefficiency, however, they secure grid reliability by imputing higher marginal costs to all ratepayers.

The EMP should focus on methods to achieve grid stabilization, such as upgraded transmission systems and, where economically justified, distributed generation (relying more on power produced by smaller local co-generation facilities). This will minimize the risk of electricity supply interruption while deploying proven energy-efficient technologies.

There is a significant and immediate need for New Jersey to undertake a thorough analysis of its existing natural gas and electric generation and transmission infrastructure. To the extent that our existing infrastructure is found insufficient to provide adequate, reliable and cost-effective service going forward, it must be expanded and improved to accommodate the State’s ever-increasing energy demands.

Energy demand continues to grow steadily at a pace that exceeds the supply and transfer capabilities of our infrastructure. The accelerating retirement of aging power plants over the past decade, coupled with the failure to replace the retired plants, has exacerbated this trend. Several thousand megawatts of generation have already been or are scheduled for retirement and more retirements are expected. Our existing fleet of power plants is rapidly aging, with nearly half of our generation infrastructure being 30 years or older, meaning that these plants have exceeded or are nearing the end of their useful lives. Little conventional generation has been added in recent years and few viable projects have been proposed.

The utility transmission and distribution systems have also become increasingly inadequate, resulting in a constrained delivery system that is not always capable of delivering the state's power requirements during periods of peak usage, leading to congested transmission lines and increased power costs. As a result, a PJM Interconnection study recently concluded that significant upgrades of the state's generation and transmission infrastructure are necessary if the state is to avoid additional congestion and the prospect of brownouts and blackouts in the near future. It is imperative that the state adopt policies that will achieve the state's overarching goal to maintain, on a continuing basis, reliable supplies of energy at a reasonable price.

An Accurate Cost/Benefit Analysis of Solar is Needed

A robust renewable energy industry is essential to New Jersey's environmental and economic health. Our commercial and industrial real estate sector is developing a national reputation for green buildings and is highly dependent upon the SREC market.

Solar is creating new opportunities at a time when New Jersey and the Nation face chronic unemployment. In just three short years, the solar industry has grown from a small startup to an industry that now employs more Americans than U.S. steel production, according to the Solar Energy Industries Association. It is estimated that over 3,000 jobs have been created in the Garden State by the solar industry – and job growth could be as high as 27% by the end of 2011. There are now more solar jobs in New Jersey than in traditional power generation. In just one example, Avidan Management's recently completed solar project in Edison (the largest roof array of solar panels in the country) employed eighty people over six months. In addition to the creation of green jobs, solar renewable energy has created an important revenue source for the commercial real estate industry during this economic crisis, and has created thousands of green jobs from within the construction industry.

Continuing efforts to satisfy the Renewable Portfolio Standards will be hampered without maintaining, in some form, the current incentive programs, at least with respect to commercial and industrial uses. In evaluating solar, the EMP uses outdated information and numbers (from 2008). We need to establish a methodology to accurately evaluate the costs and benefits of solar.

The draft EMP places substantial focus on rigorous "net economic benefit" analysis which, on the surface, provides a sound framework for policy evaluation. However, the current draft does not apply this principle consistently. With regard to solar specifically, some of the costs are either outdated or misconstrued while some of the benefits have been overlooked or de-emphasized.

Overestimated rate impact assessment: One part of the EMP claims solar policy "accounts for approximately 25% of the cost associated with the State and federal policy component of the average residential bill," yet the section that details these costs shows solar policy is less than 5% of the State and federal policy component. The draft EMP suggests that SRECs are an "expensive program" accounting for 0.09 cents per kWh or less than 1% of the average residential bill, while it glosses over other transition charges that together account for 1.69 cents per kWh or more than 9% of the average residential bill. More importantly, the SREC valuations used in the EMP analysis are no longer valid now that the market-based mechanism has taken hold.

Outdated and erroneous estimates of the costs of solar technology relative to conventional generation and other renewable technologies: The EMP indicates that a levelized cost of energy (LCOE) for solar at \$390/MWh was used in the analysis. However, the widely cited Lazard LCOE analysis (2010 version 4.0) shows solar is now between \$134 and \$192/MWh, less than half the assumed value in the draft EMP. Solar is competitive now with many peaking resources and, as one of

the few generation technologies that continues to decline in costs, its competitiveness and potential benefits to ratepayers will only improve.

Overstated estimates of future compliance costs: Looking ahead, the EMP projects that SRECs will be priced at 75% of the SACP, yet they are trading at 30% of the SACP today. This is a questionable assumption, given there is no SACP schedule beyond 2016 and the fact that SREC price data cited above shows SRECs are clearly decoupled from the SACP in a more balanced market that we expect to persist over the coming years. The most appropriate method for anticipating SREC prices in a competitive market is to forecast capital costs, not the administratively set SACP (or ceiling). In the absence of a more reasonable assumption, the claims of the EMP regarding impact on rate payers are almost certainly wrong.

Inconsistent and biased quantification of solar benefits relative to other technologies: The EMP acknowledges that approximately 2,000MW of in-state combined cycle gas under LCAPP would provide a net economic benefit to rate payers of \$1.8B over 15 years, primarily due to lower wholesale energy prices. But the EMP fails to mention how 4,500MW of in-state solar would have a similar effect, amplified by the fact that solar generates more during peak demand when electricity prices are at their highest.

Incomplete identification of solar benefits that accrue to all ratepayers and NJ citizens: Solar is also left out of the discussion on distributed generation and the associated benefits of reduced congestion charges, as well as deferred transmission and distribution investments. To be clear, the benefits of solar are known and quantifiable. A recent study by Richard Perez of SUNY Albany indicated that approximately 3,000MW of solar could yield an annual benefit of between \$550M and \$900M from the combined benefits of distribution loss savings, distribution capacity savings, near- and long-term fuel price hedge values, lost goods and services reductions, environment and health cost reduction, and increased tax revenue from jobs created. The draft EMP does not seem to consider these values.

Various industry professionals may debate the methodology for measuring benefits of solar, but their existence is undeniable and their omission from the draft EMP is disappointing. This, unfortunately, leads to an incomplete picture of the role that solar can and should play in the future of New Jersey.

The rapid growth in the New Jersey Solar market is successful testimony to a decade of legislative and thought leadership. We are moving towards a market-based SREC model that is now adjusting as intended, lowering SREC values as supply increases.

Defining the Solar Alternative Compliance Payment (SACP) Schedule and Stabilizing the Renewable Energy Market

Solar is a \$39 billion global market and growing. New Jersey needs to continue to attract its share of this market. No new capital will come to the market without SREC certainty, therefore the SACP needs to be defined out to 2026.

The draft EMP proposes to reduce the Solar Alternative Compliance Payment (SACP) schedule beginning in 2017, first by 20% and then by 2.54% per year to continue the current annual decrement. While we do understand the capital cost of solar installations has come down considerably since 2007 when the SACP was first structured, immediate action is needed to trim the SACP for EY 2013 – 2016 in order to stabilize the SREC market.

The Renewable Energy market is longing for the stability needed to secure adequate sustainable funding. The existing EDC SREC funding mechanisms (EDC long-term SREC Solicitations and the PSE&G Solar Loan II) will expire by the end of 2011. We recommend that the BPU establish a 15-year SACP schedule commencing in EY 2016, then continue both of these programs (which have proven successful), as the long-term (10-15 year) contracts are better for the ratepayers in lowering SREC prices versus spot pricing. Other means of financing, including but not limited to loans for the purchase of SRECs and the resale of SRECs to suppliers, should be considered as well.

Additionally, the BPU should consider establishing a floor price in excess of \$250. This will allow SRECs to trade within a range of the SACP and the floor price. This trading range will keep the New Jersey solar market from crashing as it has in Pennsylvania. Based upon the New Jersey Office of Clean Energy's reports and the volume of solar projects currently in the pipeline, it is expected that New Jersey will achieve its previously estimated SREC requirement for energy year 2012. This will stop the New Jersey solar market in its tracks. Therefore, we endorse Senator Smith's bill S-2371, which would accelerate New Jersey's SREC production requirements.

The Realities of Using Brownfields as Solar Farms

Section 6.2 - Initiatives to Promote Renewable Energy - states that the EMP promotes solar installations on brownfields and landfills because these properties typically cannot be developed for general commercial or residential purposes. The EMP perceives a dual benefit from use of these sites for State-subsidized solar installations; that being, a decrease in the cost of doing business by reduced energy costs and the return to productive use of contaminated properties.

The EMP's presumption, stated on page 102 in the second paragraph under the heading *Promote Solar PV Installations that Provide Economic and Environmental Benefit*, that brownfields and landfills are typically unable to be developed is inaccurate. New Jersey's Brownfield and Contaminated Site Remediation Reform Act at **N.J.S.A. 58:10B-1 et seq.** ("BACSRA") has been providing financial incentives for developers to develop these types of properties since its enactment in 1993. The Brownfield Site Reimbursement Fund, which provides up to 75% reimbursement of remediation costs to developers based on new state taxes generated from development of contaminated properties, has been applied on all types of brownfields, including landfills, since its creation in 1998. These sites have been developed for a wide array of commercial and residential uses.

The 2009 Site Remediation Reform Act specifically addressed the issue of development of landfills by amending BACSRA to prohibit certain types of development on landfills. These newer restrictions; however, only prohibit construction of single family residences, public schools, private schools, charters schools and child care centers on a landfill where the remediation will involve the use of engineering controls that are required for the management of landfill gas or leachate. NJDEP's Presumptive Remedy Guidance dated November 4, 2009 clarifies that apartment buildings may be developed even where there are such engineering controls for landfill gas or leachate, so long as the remediation work plan is approved by NJDEP. There is no restriction of development of landfills without controls for gas or leachate.

The EMP acknowledges the Christie Administration's unwillingness to presume to limit the disposition of private property. The EMP therefore should not target brownfields and landfills for solar installations as this would be inconsistent with a landowner's constitutional right to use of its property as has been acknowledged by the State in the context of this EMP. Footnote 128 of the EMP points to the fact that NJDEP maintains an inventory of closed landfills on which solar installations could be located. The State may benefit from providing an incentive for installation of solar installations on landfills that were closed prior to the current landfill closure rules at N.J.A.C. 7:26-2A.9 which grandfathers landfills closed

prior to the rule adoption until the site is redeveloped, at which point the landfill must come into compliance with the current regulatory requirements. The incentive could come in the form of carving out redevelopment for energy efficient, low-impact uses such as solar installations. This would provide an incentive to owners of the many closed landfills in the state who are reluctant to sell or develop themselves because of the risk that the cost of compliance with the current landfill closure rules will exceed the value of the property.

NAIOP New Jersey looks forward to serving as a resource to the Christie Administration and the Board of Public Utilities in enacting sound energy policies in New Jersey.

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