



# **A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)**

**JANUARY 2023**

## **BASIN STREET CHARGING, INC.**

Vladimir Laborde, Chair, Board of Directors

Steve Cope, President

Sheriff David Goad, Ret., SME, Public Safety

Chief Jerrold Wright, Ret., SME, Public Safety

Jeffery J. Bordenave, VP & Senior Project Manager

Dennis Kelly, Esq., Secretary, EVP & CLO



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

### **About This White Paper for Policymakers**

This White Paper for Policymakers is being published by Basin Street Charging, Inc. (“Basin Street Charging” or the “Company”), as a resource for policymakers, especially for State and Local Regulators and Municipal Franchisors.

Because Reinvention of the Grid has already started, State and Municipal Policymakers will soon become as involved with Energy Storage Systems (“ESS”) and ESS Charging Facilities as they are now involved with the telecom industry. This is because they similarly occupy the municipal public rights of way and all similarly involve locally-present facilities and “boots on the ground” in support of public safety.

The Company brings to bear professionals with extensive experience in the electricity industry and veterans of the Telecom Wars, familiar with the “lessons learned” from the failure of the Telecommunications Act of 1996 to achieve its Federal policy goals—in particular, the failure to create a competitive telecom industry, including, especially, competitive entry into the telecom industry by the electric utility industry. Reinvention of the Grid, then, opens the door to updating local electric service policy to introduce competition within the electricity industry, and to allow electricity providers to operate microgrids using telecom software, an initial form of telecom-electricity convergence that has already started to emerge outside the U.S.

It is the ambition of this White Paper that the coming Reinvention of the Grid and extensive deployment of Energy Storage Systems will not repeat investors’ loss of many billions of dollars, resulting from the “irrational exuberance” and the “Burst of the Internet Bubble” that occurred in 2000. This loss included the abandonment of billions of dollars of telecom infrastructure that had been deployed in the Nation’s municipal rights of way during the 1990s and 2000s.

### **About Basin Street Charging, Inc. (“Basin Street Charging”)**

Basin Street Charging is a new entrant into a new field—the Energy Storage & Charging Industry. It brings to bear extensive “hands-on in the field” experience, before City and PSC regulators, in the capital markets, and in the telecom, electric utility, and related technology industries.

Basin Street Charging is an affiliate of Basin Street Technologies, Inc. (“BST”), a telecom and cybersecurity firm whose principal operations are in the Caribbean. BST uses Middle-Earth-Orbit and Low-Earth-Orbit Satellites for Internet Protocol-based delivery of: Internet, video and Cyber Security services; Next Gen Networking services focused on high-throughput and “Bridging the Digital Divide”; and converged Physical Security services, including AI-based cameras and Crisis Event Response and Recovery Access (“CERRA”)<sup>1</sup> Services, all based on Federal and Industry Standards and “Best Practices”. See, generally, <https://basinstreettech.com/>.

The Authors constitute Basin Street Charging’s Key Professional Team, and have extensive backgrounds in Telecom, Internet, Investor Owned Utilities, Public Power Companies, and the Public Sector.

---

<sup>1</sup> See CISA and ESSCC, CERRA Framework, <https://img1.wsimg.com/blobby/go/6754d4ea-d143-490a-a31b-1d2bf066d416/180313%20CERRA%20Framework.pdf>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

### TABLE OF CONTENTS

	Page
BACKGROUND: REINVENTION OF THE GRID & EMERGENCE OF ENERGY STORAGE	4
ABOUT UTILITY SCALE ENERGY STORAGE SYSTEMS (ESS)	4
ABOUT ESS CHARGING FACILITIES	6
CONCEPT OF OPERATIONS: ESS CHARGING FACILITIES	7
THE MARKET FOR UTILITY SCALE ESS & ESS CHARGING FACILITIES' SERVICES	8
<u>The Christmas 2022 Storms: A Classic Case For Resiliency Investment In ESS</u>	9
<u>EV Charging Facilities: Potential ESS Charging Facility Customers</u>	9
WHAT INTRODUCTION OF COMPETITION INTO ELECTRICITY SERVICES?	10
<u>POLICYMAKER TO DO LIST: DEVELOPING TEMPLATE ESS CHARGING FACILITY FRANCHISES &amp; ORDINANCES OF GENERAL APPLICABILITY</u>	12
ABOUT BASIN STREET CHARGING, INC,	15
FOR ADDITIONAL INFORMATION	16



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

### BACKGROUND: REINVENTION OF THE GRID & EMERGENCE OF ENERGY STORAGE

The Energy Storage Industry is a product of the Federal—and now Global—Energy Policy & Practice of Reinvention of the Grid. The Grid, itself, is a product of the rural electrification of the United States during the 1930s, and the recognized need and value of interconnecting local generation and distribution facilities for more reliable local power supply. The Grid, having largely “grown like Topsy” with U.S. National & Economic Security largely outsourced to Investor Owned Utilities and the narrow and short-term perspective of the voters who elect State Public Service Commission regulators.

**"As energy storage and lithium ion and renewables become a greater makeup of our grid, it's going to fundamentally shift how our grid currently works."**

**CNBC**

Pressure to “Reinvent the Grid” flows out of our 21<sup>st</sup> Century need to respond to National Security and National Economic imperatives and the response to increasing occurrence of natural disasters, cybersecurity attacks, and, now, physical security, as well as increasing dependence on Information Technology and Transportation Technologies for modern commerce and modern life, and the ability of Operational Technologies used by the electric utility industry to manage and control the largely Federally-regulated Interstate Electric Transmission System.

It should be noted that the National Security and National Economic imperatives precipitating the Reinvention of the Grid include the Western World’s response to the rise to global dominance of the automobile manufacturing industry by the Peoples Republic of China (PRC).<sup>2</sup>

### ABOUT UTILITY SCALE ENERGY STORAGE SYSTEMS (ESS)

Multiple Tesla Energy Storage System Components within a Tesla ESS Container



Source: Tesla

<sup>2</sup> See <https://basinstreettech.com/china-dominates-in-autos>, It is submitted that PRC’s rise to dominance of the auto industry, and the threat to Western economies that development represents, is a major driver of Federal Policy migration to Electric Vehicles, perhaps even more important than Climate Change.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

As mentioned above, Reinvention of the Grid is being precipitated by increasing pressure on the Grid to facilitate migration to Electric Vehicles, increasing occurrence of natural disasters<sup>3</sup>, cybersecurity attacks<sup>4</sup>, and, now, physical security<sup>5</sup>, as well as increasing dependence on Information Technology and Transportation Technologies for modern commerce and modern life, and the use of Operational Technologies by the electric utility industry. All of these elements have increased the need for higher-resilience electrical systems.

The principal categories of ESS now being used to “Reinvent the Grid” and meet the need for more high-reliability electricity are:

- **Electric Vehicle (EV) Batteries** (“EV Batteries”),
- **Residential Energy Storage Systems** (“ResE Storage”), used principally at the individual homeowner level to move away from the Grid, to enjoy highly-reliable and highly-resilient electricity, and to charge Electric Vehicles;
- **Utility Scale ESS**, which is used by large commercial, industrial, technology, government, entertainment, and educational institutions and campus environments; and
- **Long-Term Storage Facilities**, which are used to store large quantities of energy for subsequent use (analogous to salt dome storage of petroleum or hydrogen for later use).

Utility Class Energy Storage Systems are typically sold to large entities to replace more expensive stand-alone petroleum-fired Peak Load (“Peaker”) Systems, which cannot respond to Calls for Service as rapidly as Utility Class ESS, to increase their Uninterrupted Power Supply capacity for resilience and redundancy in lieu of Peaker Systems, or for redundancy in the event of Grid

---

<sup>3</sup> See [The Texas Tribune, How Texas’ power grid failed in 2021 — and who’s responsible for preventing a repeat](https://www.texastribune.org/2022/02/15/texas-power-grid-winter-storm-2021/) (Feb. 15, 2022)(“extreme cold” was the “No. 1 cause” identified by local authorities), <https://www.texastribune.org/2022/02/15/texas-power-grid-winter-storm-2021/>. See also [NBC News NY, Hurricane Ida Power Outages, Misery Persist 9 Days Later](https://www.nbcnewyork.com/news/national-international/hurricane-ida-power-outages-misery-persist-9-days-later/3260038/) (Sept. 8, 2021), <https://www.nbcnewyork.com/news/national-international/hurricane-ida-power-outages-misery-persist-9-days-later/3260038/>.

<sup>4</sup> See [Iron Net, Cyber Attacks on the Power Grid](https://www.ironnet.com/blog/cyber-attacks-on-the-power-grid), <https://www.ironnet.com/blog/cyber-attacks-on-the-power-grid>.

<sup>5</sup> See [CNN, Tens of thousands still in the dark after ‘targeted’ attacks on North Carolina power substations](https://www.cnn.com/2022/12/05/us/power-outage-moore-county-investigation-monday/index.html) (December 5, 2022), <https://www.cnn.com/2022/12/05/us/power-outage-moore-county-investigation-monday/index.html>. “Unfortunately, [the reported attacks] probably represent just a handful of such incidents that occurred across the country in 2022. This recent publicity could in the coming months elevate concern about distribution substations lack of physical security.” [Curricula, NERC CIP-014 Standard Explained](https://www.curricula.com/nerc-cip-014-standard-explained) (August 15, 2017), <https://www.curricula.com/nerc-cip-014-standard-explained>. See also [Newsmax, Report: Record Number of US Power-Grid Attacks in 2022](https://www.newsmax.com/newsfront/us-power-grid-electricity/2022/12/26/id/1101951/) (Dec, 26, 2022), <https://www.newsmax.com/newsfront/us-power-grid-electricity/2022/12/26/id/1101951/>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

disruption due to natural disaster, cyber attacks on or affecting the Grid, and physical threats to the Grid, as seems to be in process of beginning to happen.

### ABOUT ESS CHARGING FACILITIES

There are two different main “flavors” of ESS Charging Facilities:

**EV Charging Facilities**, which principally exist to meet the Charging needs of Electric Vehicle (“EV”) owners who do not have home or office EV Charging capabilities, or who need EV Charging Services when away from home. EV Charging Facilities are tailor-made to meet the charging needs of Electric Vehicles, and, may be customers of ESS Charging Facilities but do not compete with ESS Charging Facilities; and

**Utility Scale ESS Charging Facilities**, which are operated by: renewable electricity generation plants (e.g., solar or wind farms); Investor Owned Utilities (IOUs); Public Power Companies; Community Charging Facilities, which may be owned by a non-profit or municipal government to serve as a community resource for energy storage; and independent commercial entities who wish to develop and operate ESS Charging Facilities independent of the incumbent IOU, and serve multiple large scale electricity customers for either Scheduled or On-Demand “Spot” or “Peaker” Services, especially to meet their needs for resilience, reliability and redundancy.

Utility Scale ESS Charging Facilities are typically deployed as an enclosed environment, typically outside in the open air, with a series of concrete pads. Deployed on the pads are a series of specially-fitted 40-foot containers filled with ESS Components, including bi-directional Inverter equipment systems, Control systems, and management systems. These Facilities may range in size from as small as 2.5MW to 350MW or more.

### A Small (3.08 MW/12.32 MWh) Cutting Edge NineDot Energy ESS Charging Facility



Source: NineDot Energy



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

An ESS Charging Facility Operator may choose to initially provision the Facility with a minimum sized Power and Energy capacity to establish the market at that physical location, with plans for expanding Power and Energy Capacity, and for developing renewable generation sources, as the physical location proves out. From a size perspective, a Facility with materially less than 10 MW of Power is likely to face Overhead Costs that render it uneconomic over the long-term, absent compensating steps.

### A Large ESS Charging Facility



Source: Tesla

### CONCEPT OF OPERATIONS: ESS CHARGING FACILITIES

Commercially operating Utility Scale ESS Charging Facilities, either as Contractors to large customers, as Municipal Franchisees or municipally-owned Public Power Companies, supplying power under Energy Service Agreements, should operate under published “best practices” and industry standards.

At a conceptual level, an ESS Charging Facility’s principal purpose is to provide a power customer interface for large renewable generation facilities, as a redundant source of electricity for peak power, and as a redundant source of resilient and reliable power.

To this end, at a minimum, ESS Charging Facility operators provide Charging Facilities As A Service (“CFaaS”) to electric utilities and service providers, and to large commercial, industrial, and government customers and campus environments, as a contractual service operating in compliance with existing law.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

Based on applicable legal circumstances, including requirements of local/municipal franchise, State or municipal regulation, and municipal public power decisions, ESS Charging Facility Operators may expand their service offering to operate in municipal rights of way, provide regulated electricity services, and interconnect with the Grid as permitted. Where permitted, they may also build and operate microgrids powered by telecommunications software to add value to renewable generation projects and to better meet the customer demand for reliable and resilient electricity.

### THE MARKET FOR UTILITY SCALE ESS & ESS CHARGING FACILITIES' SERVICES

Reinventing the Grid to make it more resilient, reliable and secure, powered by new renewable energy generation, and to accommodate massive new demand for electricity triggered by environmental, national security and other concerns, has created huge demand for Energy Storage Systems and ESS Charging Facilities and services.

The projected demand for Charging Facilities is very strong, globally, with demand from buyer prospects in the U.S. and the Americas projected to increase to nearly 100 GW by 2030. In this connection, the International Energy Agency (IEA) recently reported that global renewable capacity is set for unprecedented growth, a key factor driving demand for Energy Storage:

The world is set to add as much renewable energy in the next five years as it did in the past two decades, ... the IEA says. ...

Led by solar energy, renewables are poised to overtake coal as the largest source of electricity generation worldwide by early 2025 .... Global solar capacity is set to almost triple over the next five years ....<sup>6</sup>

The following table graphically presents the projected demand for Energy Storage Systems and services over the near future.

---

<sup>6</sup> Washington Post, Renewables to overtake coal as world's top energy source by 2025, IEA says (December 12, 2022), <https://www.washingtonpost.com/world/2022/12/12/renewables-coal-energy-crisis-iea-2022/>.



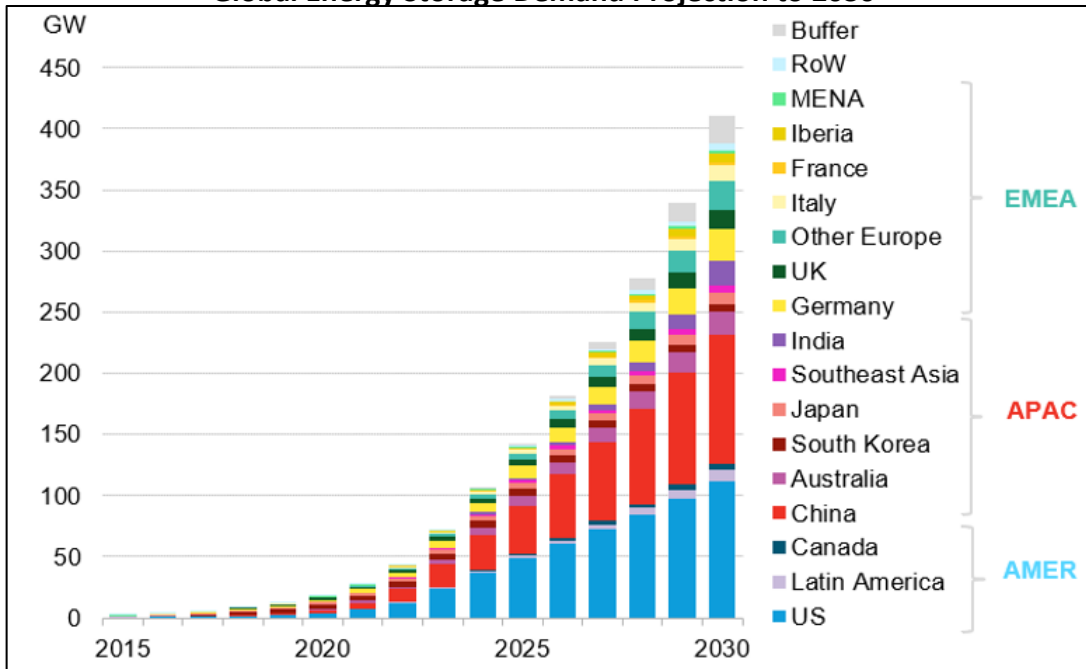


# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

Global Energy Storage Demand Projection to 2030



Source: **Bloomberg News, US, EU policies prompt Bloomberg NEF to upgrade global energy storage deployment forecasts**, October 14, 2022.

### **The Christmas 2022 Storms: A Classic Case For Resiliency Investment In ESS**

Major weather events triggering grid outages, and presenting compelling evidence for a more resilient Grid, are just one of the factors driving the demand for ESS. During the last week of 2022, Winter storms pounded much of the Nation, leading to major power outages at the worst possible time even in the thoroughly-prepared Tennessee Valley Authority region:

An estimated 1.7 million businesses and homes faced power outages on Christmas Day this year, as the U.S. power grid faced an onslaught of pressure from surging heating demands.

The Tennessee Valley Authority, which provides power for 10 million people, said on Dec. 23 that demand was nearly 35% higher than average, necessitating the electricity giant to implement rolling blackouts temporarily.

More than 6,000 megawatts of power generation, or nearly 20% of its load, was lost by TVA at one point last week after its Cumberland Fossil Plant went offline, in addition to problems at other gas-generating units.<sup>7</sup>

### **EV Charging Facilities: Potential ESS Charging Facility Customers**

<sup>7</sup> Newsmax, Holiday Storms Strained US Power Grid, Exposed Weaknesses (Dec. 28, 2022), <https://www.newsmax.com/newsfront/winter-storm-christmas-season-power-grid/2022/12/28/id/1102279/>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

Reinventing the Grid to accommodate new EV Charging Facilities, alone, has already started, and, alone, is creating huge demand for new ESS Systems and Facilities. For example, the findings of a recent study of the national highway system show that most every truck and auto stop along every highway corridor requires massive new grid interconnection, and, thus, new grid capacity. Accordingly, large truck and auto stops are prime candidates for a new ESS Charging Facility to supply at those highway stops. The study identified 71 ESS Charging Facility candidates along major highways in New York and Massachusetts alone:

**[B]y 2030, over a quarter of the 71 highway sites studied will require more than 5 megawatts (MW) in charging capacity to meet peak charging demand. As a reference, 5 MW of electric capacity is roughly equivalent to the electric demand of an outdoor professional sports stadium. Depending on local system voltages, this level of electric demand at a specific site may exceed the delivery limits of a typical distribution system interconnection and therefore require interconnection to the high-voltage transmission system. Some high-demand charging sites could reach around 40 MW in peak charging capacity by 2045, which is equivalent to the electric load of a major industrial site ...**<sup>8</sup>

The investment community, now, sees strong demand for ESS Charging Facility services. Speaking in support of its investment in NineDot Energy, <https://nine.energy/>, a New York City-based firm that deploys community-scale energy generation and battery storage projects in Metro New York City, a Principal specializing in energy transition investing at Carlyle, said, **“We believe the rapid evolution of the electric grid necessitates additional deployment of distributed energy resources, this is an important investment theme for our platform.”**<sup>9</sup>

### WHAT INTRODUCTION OF COMPETITION INTO ELECTRICITY SERVICES?

For many years, the electric utility has been described as a “natural monopoly”, in which it makes economic sense for one electricity provider to own and exercise monopoly rights regarding provision of electricity services within its concession service area.

Unless regulators and franchisors go to extraordinary lengths to prevent this outcome, Reinvention of the Grid will, as is stated above, “fundamentally shift how our grid currently

---

<sup>8</sup> National Grid Coalition, **Electric Highways: Accelerating and Optimizing Fast-Charging Deployment for Carbon-Free Transportation**, p. 2 (November 2022), <https://www.nationalgrid.com/document/148616/download>, emphasis supplied.

See also T&D World, **Power Grid is not Prepared for Electric Truck 'Avalanche'**, Nov. 23, 2022, <https://www.tdworld.com/electrification/article/21255376/power-grid-is-not-prepared-for-electric-truck-avalanche>.

<sup>9</sup> BusinessWire, **NineDot Energy Partners with Carlyle to Accelerate the Energy Transition**, January 14, 2022, <https://www.businesswire.com/news/home/20220114005479/en/NineDot-Energy-Partners-with-Carlyle-to-Accelerate-the-Energy-Transition>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

works.”<sup>10</sup> We anticipate that Reinvention of the Grid will introduce changes that are pro-competition<sup>11</sup> and pro-Public Power Company, and that Investor Owned Utilities will embrace these changes, as they migrate the electric utility ecosystem from a “natural monopoly” to a “duopoly”.

Interestingly, the telecommunications industry was, at one time, also determined to be a “natural monopoly”, and, in the United States, AT&T and the Bell Operating Companies operated under classic monopoly practices for most of the 20<sup>th</sup> Century. However, when technology changes to the telecom industry were introduced—first, the ability of separate companies to conduct a long distance business in competition with AT&T and, later, the ability of separate companies to conduct a wireless telecommunications business in competition with AT&T—the telecommunications industry ultimately embraced a duopoly model of telecommunications, which reduced “monopoly envy” and animosity toward carriers, increased efficiency of operations and, most important to carriers, increased carrier profitability.

Control of power generation plants by electric utilities has, until recently, represented a major barrier to entry by competitors. In recent years, however, National and, indeed, Global policy has migrated away from fossil fuels and toward an imperative of operating solar, wind, hydrogen and other renewable generation supplies. This imperative has encouraged development of renewable generation of electricity, on small scale and large, by any number of new entrants, including many players not affiliated with the electricity industry.

An example of such new entrants involves a consortium of non-profits, the City of New Orleans and others, which have together raised more than \$10Million to enhance grid resilience, after an extended power outage in Southeast Louisiana in the weeks following the Hurricane Ida weather event.

The City of New Orleans, which has long chafed at the monopoly position occupied by Entergy New Orleans, Inc., an IOU, recently provided material funding to a broad-based community

---

<sup>10</sup> See CNBC quote, page 4 above.

<sup>11</sup> The City of New Orleans, reacting to an extended power outage in Southeast Louisiana after Hurricane Ida, has already taken steps to provide electricity to churches and community centers that is aimed at providing relief to the most vulnerable. the “New Orleans City Council approved \$1 million in Wisner Funds to Together New Orleans for its Community Lighthouse project. It aims to create a network of resiliency hubs, called lighthouses, by providing commercial-scale solar power and back-up battery capacity to 100 congregations and community institutions.” See **BIZ News Releases, City Council Approves \$1M for Resiliency Hubs**, <https://www.bizneworleans.com/city-council-approves-1m-for-resiliency-hubs/>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

organization to assure access to electricity by churches and community centers serving some of the City's most vulnerable populations. To this end, recently, the

New Orleans City Council approved \$1 million in [non-profit funds available to the City] to Together New Orleans [, a community organization,] for its Community Lighthouse project. It aims to create a network of resiliency hubs, called lighthouses, by providing commercial-scale solar power and back-up battery capacity to 100 congregations and community institutions.<sup>12</sup>

That is, a community organization focused on serving the electricity access needs of Southeast Louisiana's most vulnerable will own and operate a \$14Million network of commercial-scale solar panel/battery energy storage systems that will generate and store electricity to serve 100 congregations and community centers. It seems clear that, to maximize its sustainability, this network could create a microgrid that is centrally managed, and operates using public rights of way, and that sells excess power to other electricity users and/or the Grid. This, of course, is a far cry from an electricity generation and distribution system owned and operated by electric utilities.

Going forward, it remains to be seen whether, how and to what extent opportunities to introduce competition in electricity service provision is embraced by Electricity Regulators, Investor Owned Utilities, Municipalities, new entrant ESS Charging Facility Operators, and others.

### **POLICYMAKER TO DO LIST: DEVELOPING TEMPLATE ESS CHARGING FACILITY FRANCHISES & ORDINANCES OF GENERAL APPLICABILITY**

Municipal, County and State Governments have inherent Police Power rights to regulate conduct, especially commercial conduct, within their jurisdictions that touch on the following:

- The Right to Occupy the Public Rights of Way, which are at the heart of any Municipal franchise as part of municipal, county and State Government Police Powers
- The Right to Conduct an Inherently Dangerous Business—it can hardly be argued that the Aggregation and Distribution of high-voltage electricity is not an inherently Dangerous Business that municipalities and county governments, as well as State Governments, have the right to regulate under their Police Power
- The Right to Conduct an Ultrahazardous Enterprise—including the right to manage and dispose of Ultrahazardous Substances comprising Energy Storage Systems, is inherently within the Police Power of municipal, county and State Governments

---

<sup>12</sup> See **BIZ News Releases, City Council Approves \$1M for Resiliency Hubs**, <https://www.bizneworleans.com/city-council-approves-1m-for-resiliency-hubs/>.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

At the risk of waiving their rights if they do not act, policymakers, particularly electricity regulators and municipal franchisors, should consider regulating ESS Charging Facilities' rights to access the public rights of way, conduct of an inherently dangerous business and conduct of an ultrahazardous enterprise. They should do so by requiring that ESS Charging Facilities comply with appropriate technical standards and industry best practices established by local government, and attempt to avoid unforeseen problems that may arise later. Policymakers are encouraged to put in their "To Do" List a plan to engage with the ESS Charging Facility operators and other stakeholders on the following standard and best practices issues.

- **GRANT OF PUBLIC RIGHT OF WAY AND OTHER STANDARD FRANCHISE RIGHTS AND PRIVILEGES.** Unless ESS Charging Facility Operators obtain the right to occupy public rights of way from Federal, State or municipal or county governments, they will have no right to occupy public rights of way. It is respectfully submitted that local and municipal authorities should be the primary grantors of rights to occupy the public rights of way, and that the vehicle to grant those rights should also regulate ESS Charging Facility operations, including rights to buy and sell electricity and to provide Electricity Distribution services.
- **COMPLIANCE WITH MUNICIPAL FRANCHISE ACCEPTANCE, REPORTING, INSURANCE, SECURITY DEPOSIT AND OTHER CUSTOMARY FRANCHISE REQUIREMENTS.**
- **ESS COMPONENT FIRE RISK.** Comment: Certain ESS components may pose an unreasonable fire risk, while other components, based on lab testing, pose much less fire risk. Many fire departments, including the New York Fire Department, have carefully assessed these risks and published a thorough public safety regulatory requirement.
- **ESS COMPONENT DISPOSAL ENVIRONMENTAL RISK.** Comment: Certain ESS components, especially those that include heavy metals, may pose an unreasonable environmental risk upon disposal, while other components, based on lab testing, pose much less fire risk. Franchises should address the disposal risk by specifying acceptable disposal practices.
- **ESS COMPONENT DISCLOSURE.** Comment: For reasons outlined above, ESS Charging Facilities should be required to be very transparent and very detailed in disclosing the composition of the ESS components that will be located in or sold by their Facilities.
- **CYBERSECURITY PRACTICES.** Comment: Charging Facility Information Technology (IT) and Operational Technology (OT) Systems should be maintained in a high-state of cybersecurity conformance with the Detect, Identify and Protect "Core Functions" of the NIST Cybersecurity



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

Framework,<sup>13</sup> as independently certified. The Charging Facility should have an active and on-going Cyber Maturity Program, as reflected by independent review.<sup>14</sup>

- **BLOCKCHAIN IMPLEMENTATION.** Comment: For certain database functions that benefit from security and transparency features, Blockchain, a distributed database protocol, is clearly superior to centralized database technologies. Blockchain should be utilized for those functions in support of any ESS Charging Facility effort.
- **PHYSICAL SECURITY PRACTICES.** Comment: Converged Cyber Security/Physical Security models should be encouraged or required, including the use of digital and internet technologies to maintain physical security, and compliance with DHS-established Crisis Event Response & Recovery Access (CERRA) best practices.<sup>15</sup>
- **PUBLIC SAFETY PRACTICES.** Comment: Local law enforcement agencies should engage with the Charging Facility Operators in much the same way that the Fire Service is engaging with them.
- **ARCHITECTURAL COMPATIBILITY OF CHARGING FACILITIES WITH SURROUNDING URBAN CONTEXT.** Comment: ESS Charging Facilities typically have the look and feel of a cutting edge industrial facility, with outside plant typically consisting of 40 foot containers, electrical equipment and cables, security fencing, small office space, and parking spaces. This outside plant appearance will be perfectly acceptable in industrial areas, Franchisors may want to consider developing Charging Facility Design Guidelines for implementation in high-rise office building and commercial areas, for compatibility with their urban context.
- **CONFORMANCE WITH ELECTRIC UTILITY INDUSTRY TECHNICAL STANDARDS & BEST PRACTICES.** Comment: Comply with applicable IEEE Standards and Industry Best Practices, as recommended by engineering technical advisors. In the ESS Charging Facilities context, Best Practices, of course, cover many areas beyond technical and engineering practices to include, e.g., physical security practices.<sup>16</sup>

---

<sup>13</sup> See **NIST Cybersecurity Framework** (April 2018), at p. 6, <https://www.nist.gov/cyberframework/framework-documents>.

<sup>14</sup> Compare favorably the recommendations of the National Sheriffs' Association Cybersecurity & Crime Work Group to the Nation's Sheriffs, their partners in local law enforcement, and every agency of the Emergency Services Sector in **NSA Cybersecurity & Crime Work Group, The Recommended Path Forward On Cybersecurity For Sheriffs & Their Partners**, pp. 3-10 (December 2022), <https://img1.wsimg.com/blobby/go/6754d4ea-d143-490a-a31b-1d2bf066d416/221212%20FINAL%20REPORT%20ON%20PATH%20FORWARD%20ON%20CYBERSE.pdf>.

<sup>15</sup> See Note 1.

<sup>16</sup> See, e.g., **Best Practices To Be Considered for Transmission and Distribution Grid Components**, including Perimeter Security, Access Control, Lighting, CCTV/Cameras and Remote Monitoring, Intrusion Detection, Entry/Exit hardening, Line-of-sight Gunfire Mitigation, Standoff Distances to Critical Assets, Key and Lock Program, Visitor Access, Security Signage, Personnel Screening and Background Checks, Insider Threat, Drones and the Overhead



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

- **RATE, GRID ACCESS AND SERVICE LEVEL REGULATION:** Comment: Reinventing the Grid will require huge interaction with IOUs and other Grid component operators who are currently regulated. For example, for Charging Facilities will need to buy and sell power from the Grid, and to use the Grid to transport electricity to Customers, including IOUs and other Grid component operators. Since ESS Charging Facilities are, essentially, an Uninterruptible Power Supply (UPS) service, some operators may choose to provide Service Level Agreements, Time of Day Rates, and other competitive tools, and others may not. Regulatory Policymakers may wish to consider addressing existing regulation regimes to address these Rate, Grid Access and Service Level issues. Regulatory Policymakers may also wish to consider whether and how it will regulate ESS Charging Facilities from these standpoints.
- **COMPETITIVE PRACTICES.** Comment: Unless regulators and franchisors go to extraordinary lengths to prevent this outcome, Reinvention of the Grid will, as is stated above, “fundamentally shift how our grid currently works.”<sup>17</sup> We anticipate that Reinvention of the Grid will introduce changes that are pro-competition and pro-Public Power Company, and that Investor Owned Utilities will embrace these changes, as they migrate the electric utility ecosystem from a “natural monopoly” to a “duopoly.” Public Service Commission Regulations and Municipal Franchises should state the agency’s Competitive Policy to be achieved by regulated firms and franchisees under its jurisdiction.

### ABOUT BASIN STREET CHARGING, INC.

Basin Street Charging, Inc. (the “Company”) is a closely held early stage Minority Business Enterprise Louisiana Subchapter C Corporation. See <https://basinstreettech.com/secure-energy>.

As to Cybersecurity, the Company has entered into a Strategic Partnership with Tabiri Analytics, Inc., a world-class team of cybersecurity experts that is close to the Company and loosely affiliated with Carnegie-Mellon University. The Company anticipates operating in close involvement with Tabiri and with a high degree of cybersecurity expertise close at hand in all major efforts.

In its quest to become an AI Company, the Company is actively involved in the Harvard D<sup>3</sup> Institute, Powered by Harvard Business School, <https://d3.harvard.edu/>, which is focused on “Democratizing AI Beyond Data Scientists & Catalyzing The Building of New AI Companies”. Management is currently using several low cost Artificial Intelligence as a Service (“AlaaS”) online services to build its in-house menu of AI Functions to automate routine functions and avoid unnecessary human labor.

---

Threat, and Use of Security Patrols. Curricula, NERC CIP-014 Standard Explained (August 15, 2017), <https://www.curricula.com/nerc-cip-014-standard-explained>.

<sup>17</sup> See CNBC quote, page 4 above.



# BASIN STREET CHARGING, INC.

## A WHITE PAPER FOR POLICYMAKERS ON ENERGY STORAGE SYSTEMS (ESS)

JANUARY 2023

IN SUM: The Company has been launched to pursue business opportunities in and related to the redeployment of the Grid, including, in particular, the deployment and operation of Energy Storage System (“ESS”) Charging Facilities. In this connection, the Company's Key Management Team has spent many years in developing relationships within the IOU and Public Power industries and policymakers and understanding policy execution processes within the United States, the Caribbean and elsewhere, that Management believes will be useful to the Company and the communities it serves going forward.

### FOR ADDITIONAL INFORMATION, PLEASE CONTACT:

Vladimir Laborde, Chair	678-668-9013	<a href="mailto:vlaborde@basinstreettech.com">vlaborde@basinstreettech.com</a>
Steve Cope, President	931-212-4093	<a href="mailto:scope@lighttube.net">scope@lighttube.net</a>
Sheriff David Goad, Ret., SME	301-268-2901	<a href="mailto:dgoad78@gmail.com">dgoad78@gmail.com</a>
Chief Jerrold Wright, Ret., SME	843-991-2220	<a href="mailto:jwright@jbw-consulting.com">jwright@jbw-consulting.com</a>
Jefferey Bordenave, Sr. Project Mgr.	504-503-9443	<a href="mailto:txshowtime@yahoo.com">txshowtime@yahoo.com</a>
Dennis Kelly, Esq., EVP & CLO	504-251-0240	<a href="mailto:dkelly@basinstreettech.com">dkelly@basinstreettech.com</a>

####