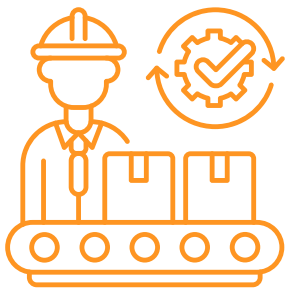


# Executive Summary:

# Microgrid and Grid Resiliency Act



## **INVESTMENT AND JOB GROWTH FOR ECONOMICALLY DEPRESSED ZONES**

### **Summary of Legislation**

The legislation would allow for the creation of microgrid zones in certain areas of the state. A microgrid is an area which generates electricity and is independent of the traditional power grid. Microgrids are also exempt from some limitations enforced on traditional utilities. In return for such exemptions, grid operators will have the option to use microgrids to help them balance their energy systems through demand response. This is a process where microgrids provide power to the main power grid if energy is needed during an emergency or in order to deal with periods of high demand.

### **What Problem is the Bill Solving?**

The price of power has become a major factor in the decision making process for the next wave of industry and manufacturing. Traditional utilities are not well equipped to provide power that is cheap enough to attract these new customers to their service territories.

Microgrids offer a solution to this problem by allowing businesses to avoid some of the costs that are associated with traditional energy systems. One of those costs is transmission of power. Customers on a microgrid can co-locate or build right next to the source of power.

These microgrids also allow for large buyers of power to negotiate cheaper power prices than what is currently available through traditional energy markets.

Two of the major hurdles with microgrids in the past has been the ability to self-regulate excess power or lack thereof. This hurdle forces most microgrids to acquire approval for a grid interconnection before the building phase can even begin which is expensive and time consuming. However, due to the evolution of high-density flexible loads (HDFL), this is no longer an issue. HDFLs can ramp up or down within seconds which allows microgrids to self-regulate when there is excess power supply or lack thereof.



## **IMPROVE GRID RESILIENCY & STABILITY WHILE DRIVING DOWN POWER PRICES**



# Talking Points for the Bill

- This policy allows power companies, utilities, co-ops, or firms to participate in owning and controlling these microgrids. Utilities can also partner with microgrid operators for balancing services back to the traditional grid such as demand response.
- Over the long term, power prices can be reduced for customers within a region and within the state as there is less dependence on expensive infrastructure used to increase supply during peak demand.
- It can be difficult for rural, industrial or commercial users of energy to find generation which fits their needs which prevents them from building in areas such as the North Country. Rural energy users can attach to these microgrids, shortening the distance between generation and usage. Industrial users can make sure more than enough energy is being generated to meet their needs.
- Microgrids can help balance the traditional energy grid through demand response. Recently, some regions have struggled with issues like rolling brownouts or blackouts, especially in times of high energy demand. This legislation mandates that microgrids, once connected to the traditional grid, provide energy to the traditional grid in times of high demand or natural disaster. The policy also protects against those services from being abused.
- Microgrids can allow for industrial users of power to produce energy outside of the main energy grid. Large users of power have often found issues within the traditional energy systems that prevent them from finding cheap enough power. Microgrids are a way to work with local governments to improve the system.
- Microgrids can operate as a backup emergency reserve for the state and the surrounding areas during times of peak demand which typically arise during winter storms, heat waves, and other natural disasters.
- During the recent storms in the USA, power prices can surge to over \$500 per MW/hr which is a 10-20x increase in the average price of power during non-peak pricing. A microgrid which becomes connected to the traditional grid can help reduce the impact of extreme weather on the price of power by delivering power to the traditional grid for customers who need it most. This allows microgrids to operate as a backup emergency reserve for the state and the surrounding areas. If enough are built

# Section By Section Breakdown of the Legislation



- The legislation defines "microgrid" "microgrid zone" "demand response"
- A "microgrid" means a local energy grid with control capability, energy generation, the full ability to distribute power to its customers, has a specific service boundary, can be connected or disconnected from the traditional grid and operate in tandem with or autonomously from the grid, can be operated with or without the coordination of the local utility power provider.
- A "microgrid zone" means an area of designated land for which the minimum size will be set at 5 acres. Each microgrid zone shall reside within a single county.
- "Demand response" means a change in the power consumption of a microgrid to help ensure the demand for power is met on the grid during peak demand.
- The board of county commissioners within a county shall petition the Department of Energy for a microgrid designation, but before doing so they shall hold a public hearing. The board shall designate no more than 3 areas of land within its county.
- The Department of Energy shall oversee all microgrids built within and outside the microgrid zones and have the authority to approve or deny a petition at its discretion
- The Department of Energy shall complete an analysis of the potential impact of the microgrid zone including how it will impact retail customers outside of the zone and nonparticipating retail customers within the zone. They shall also review how the microgrid will meet a threshold of approval based on the microgrids ability to improve grid stability, resiliency, and if the microgrid can improve clean energy production.
- Microgrids have limitations and requirements which including that a microgrid must provide up to 20% of their power generation to the traditional grid in order to provide stability and reduce power prices. These requirements also have parameters to prevent them from being abused.
- When providing demand response back to the traditional grid, the microgrid operator is entitled to a regular rate of return consistent with local power pricing.
- Rate regulation shall not provide to those who consume electricity entirely within the microgrid area as long as they are not purchasing electricity that was previously provided outside of the microgrid and as long as the power is used for industrial or commercial purposes.
- Utilities providing service under this section shall not recover costs associated with that service through rates imposed on retail customers outside of, or not participating in the exemptions provided by, a microgrid zone.