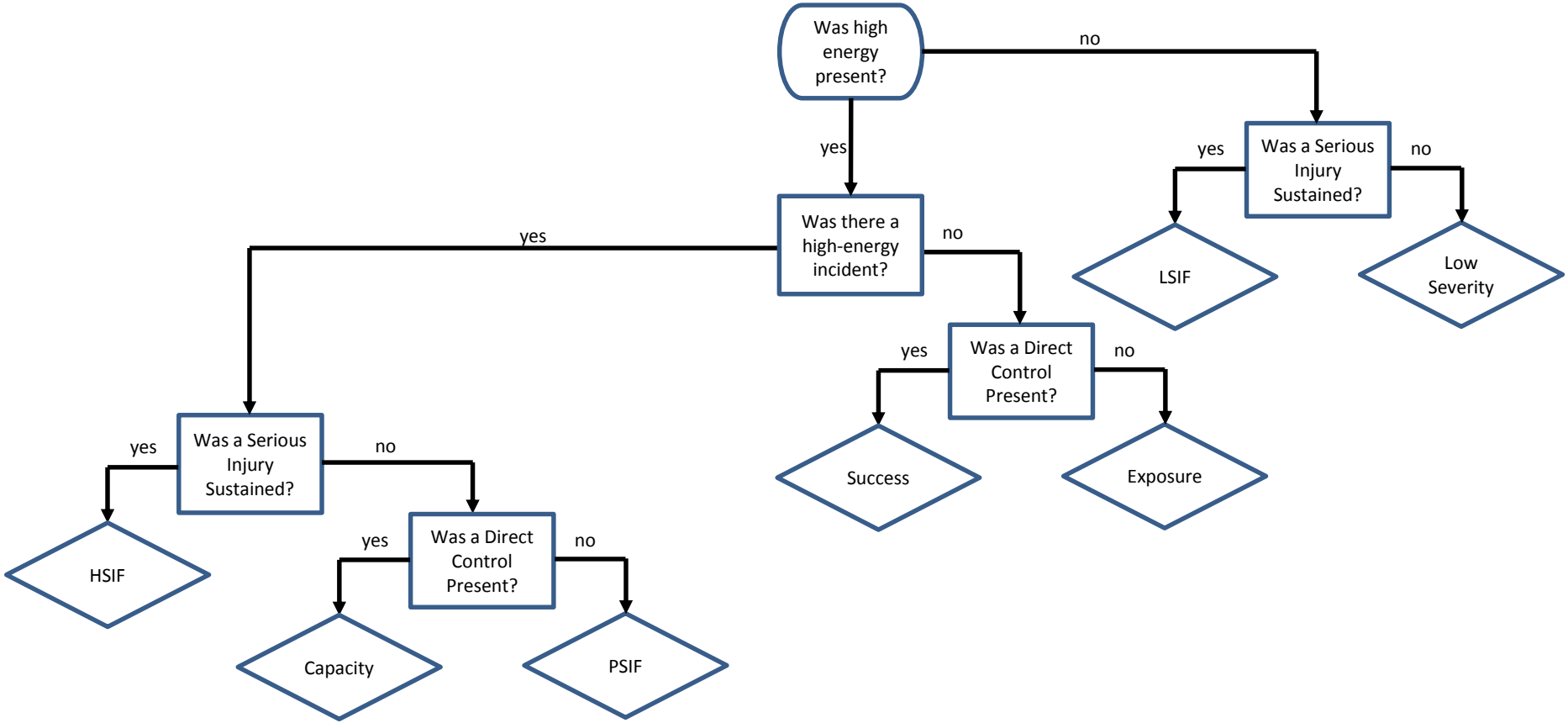
Edison Electric INSTITUTE

EEI – Safety Assessment and Learning Model

Dr. Matthew Hallowell, on behalf of the EEI working group


Was high energy present?
no
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Was a Serious Injury Sustained?
yes
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LSIF
Low Severity
Was there a high-energy incident?
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Was a Direct Control Present?
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Success
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Capacity
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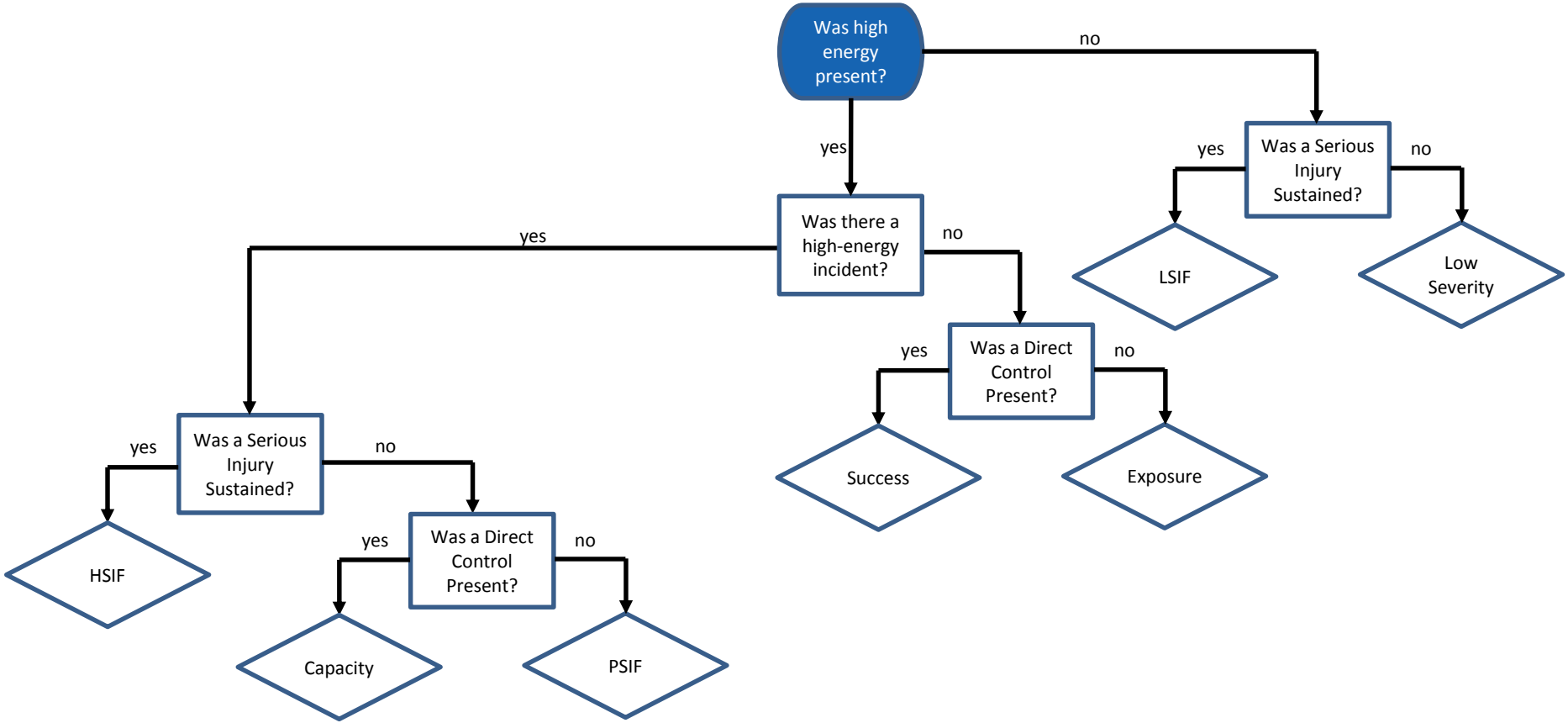
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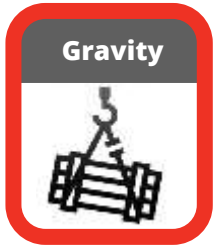
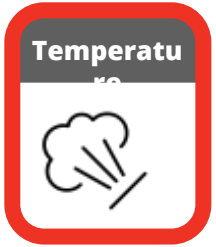
What is “High Energy?”



Suspended Load

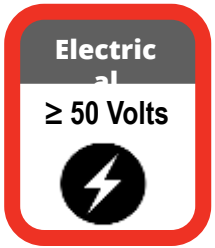
Mobile Equipment and Workers on Foot

Heavy Rotating Equipment

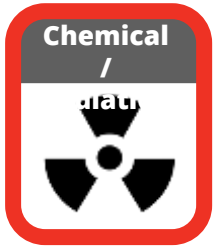


Steam

Explosion

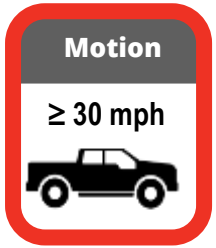


Electrical Contact with Source

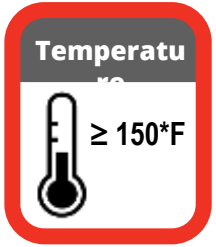


High Dose of Toxic Chemical or Radiation

Fall from Elevation

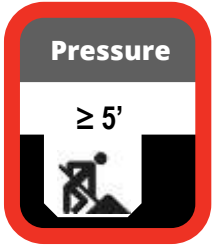


Motor vehicle incident (occupant)



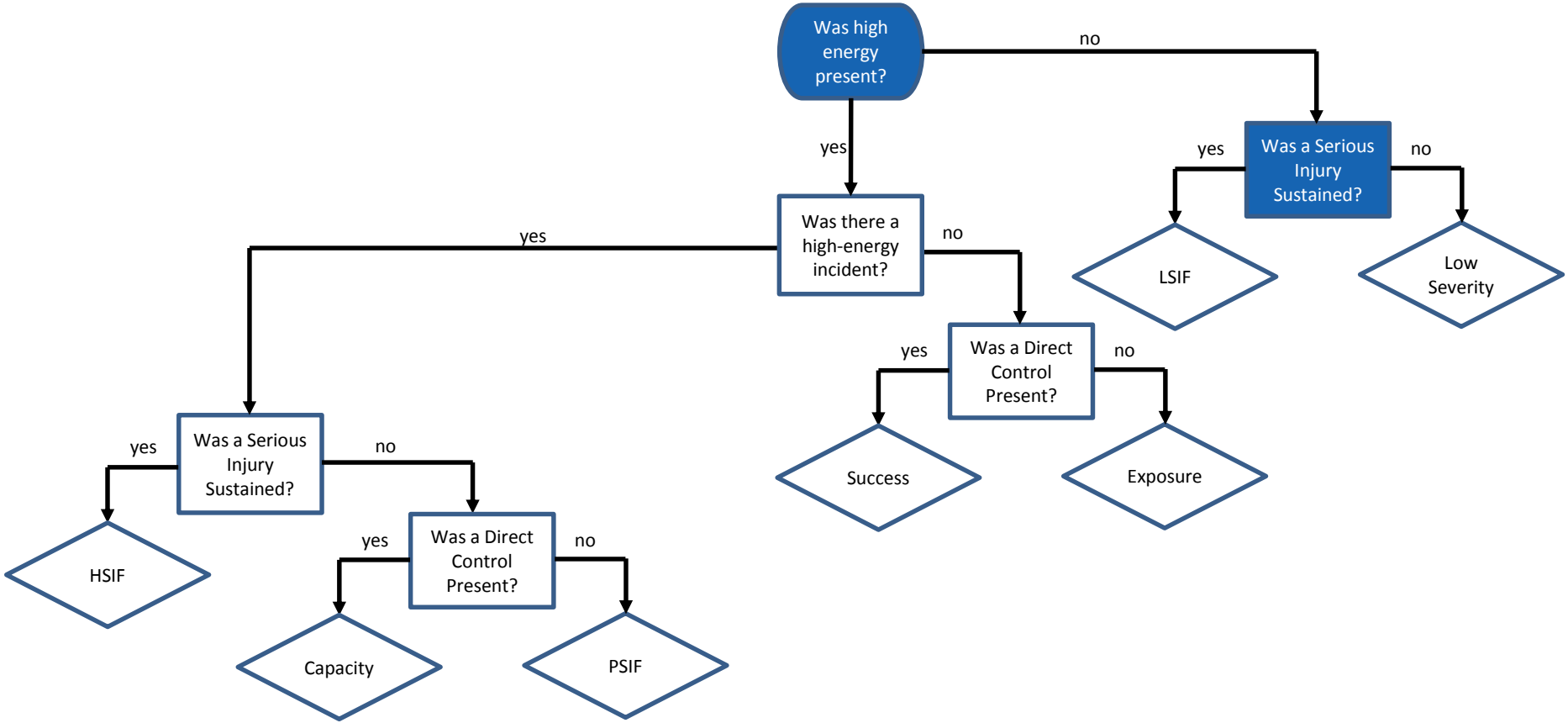
High Temperature

Fire with Sustained Fuel Source



Excavation or Trench

Arc Flash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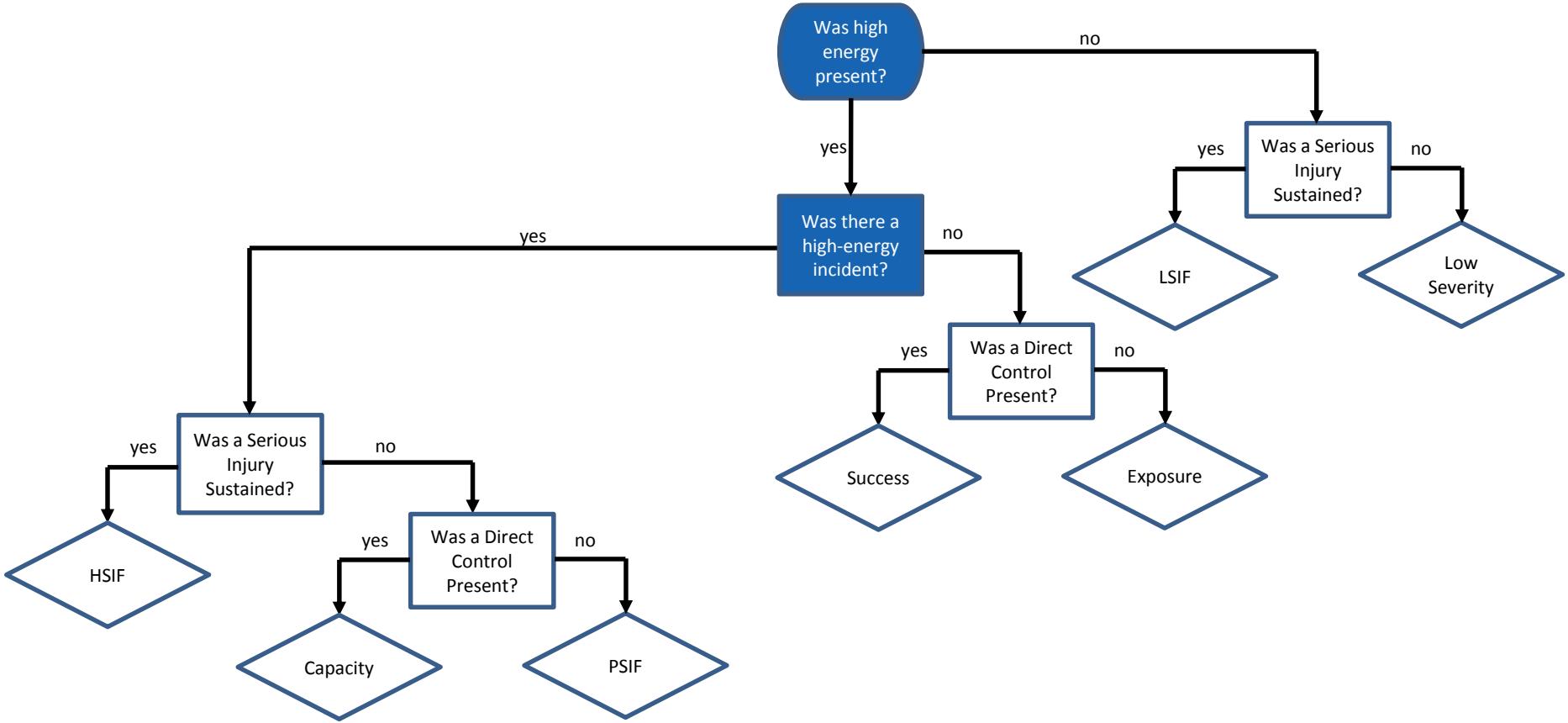
Was a Serious Injury Sustained?

- We defer to the EEI SIF criteria.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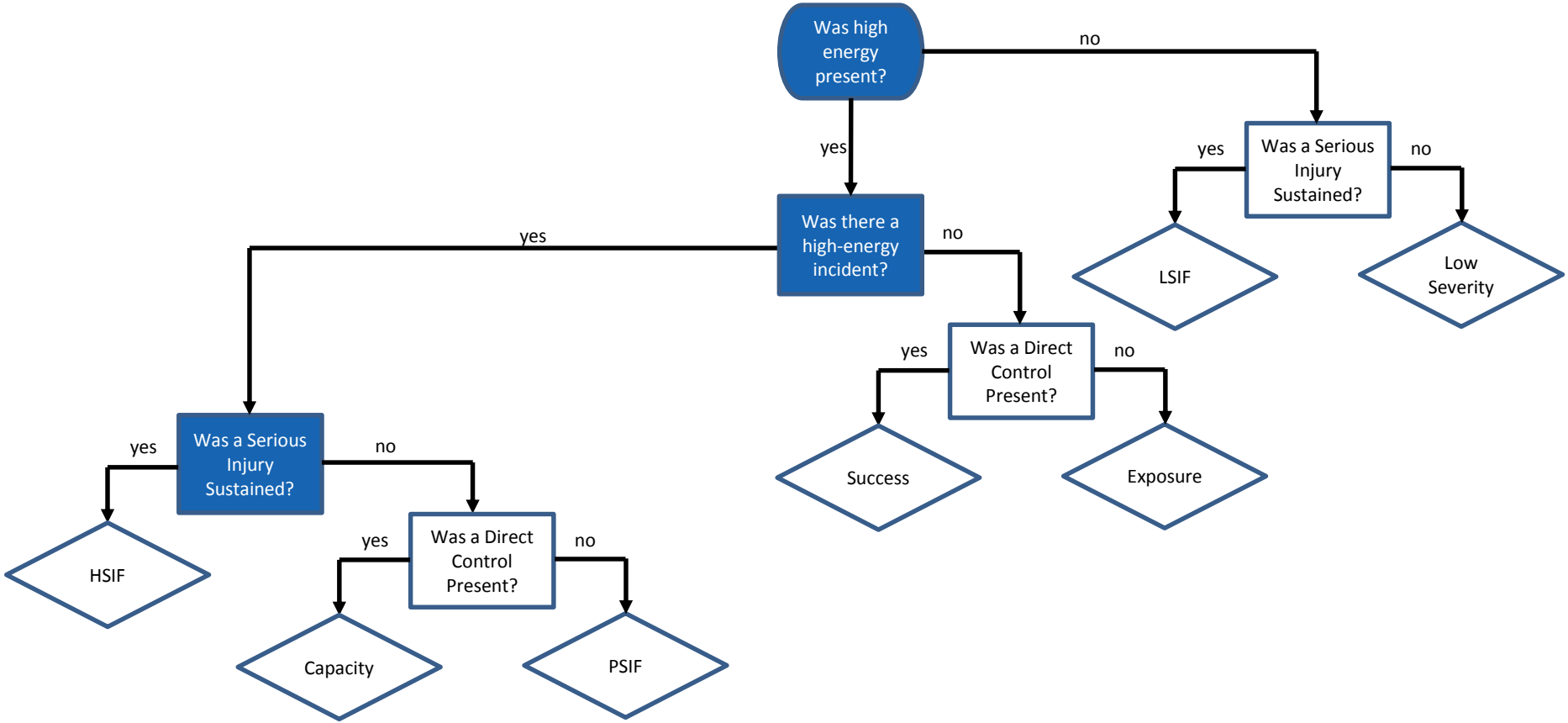
Was there a high-energy incident?

- **An instance where the high-energy source was released and where the worker came in contact with or proximity to the high-energy source**
- "Released" is defined as:
  - Instance where energy source changes state while exposed to the environment
- "Contact" is defined as:
  - Instance when high energy is transmitted to the human body
- "Proximity" is defined as:
  - A hazardous circumstance where the boundary of the high energy exposure is within 6 feet of a worker who has unrestricted egress
  - Any distance to a high energy source when there is a confined space or situation with restricted egress where a worker cannot escape the energy source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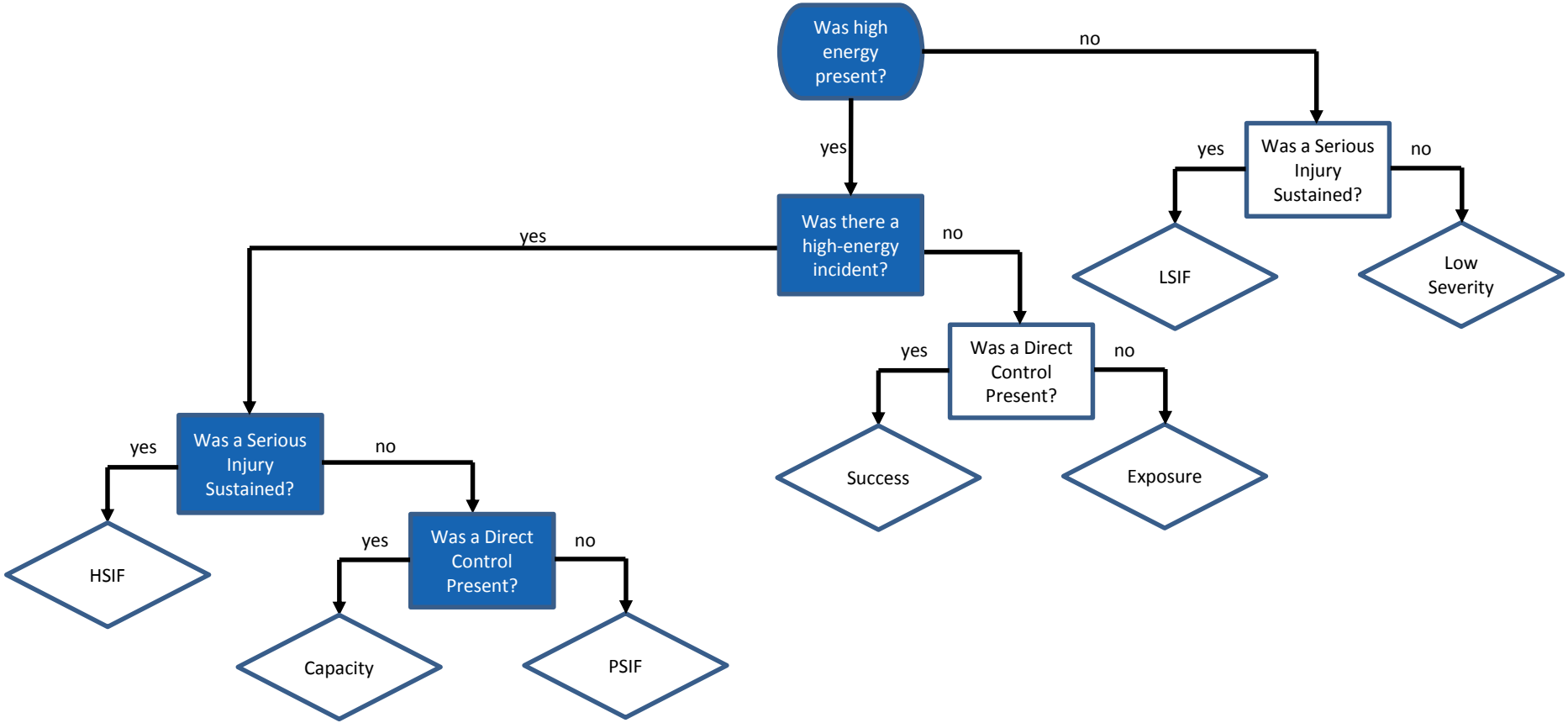
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Was a Direct Control Present?

For each high energy source, a direct control is present if:

1. The control is specifically targeted to the high-energy source
2. The control effectively mitigates exposure to the high energy source when installed, verified, and used properly (i.e., a SIF event cannot reasonably occur)*
3. The control is effective even if there is unintentional human error during the work period (unrelated to the installation of the control)

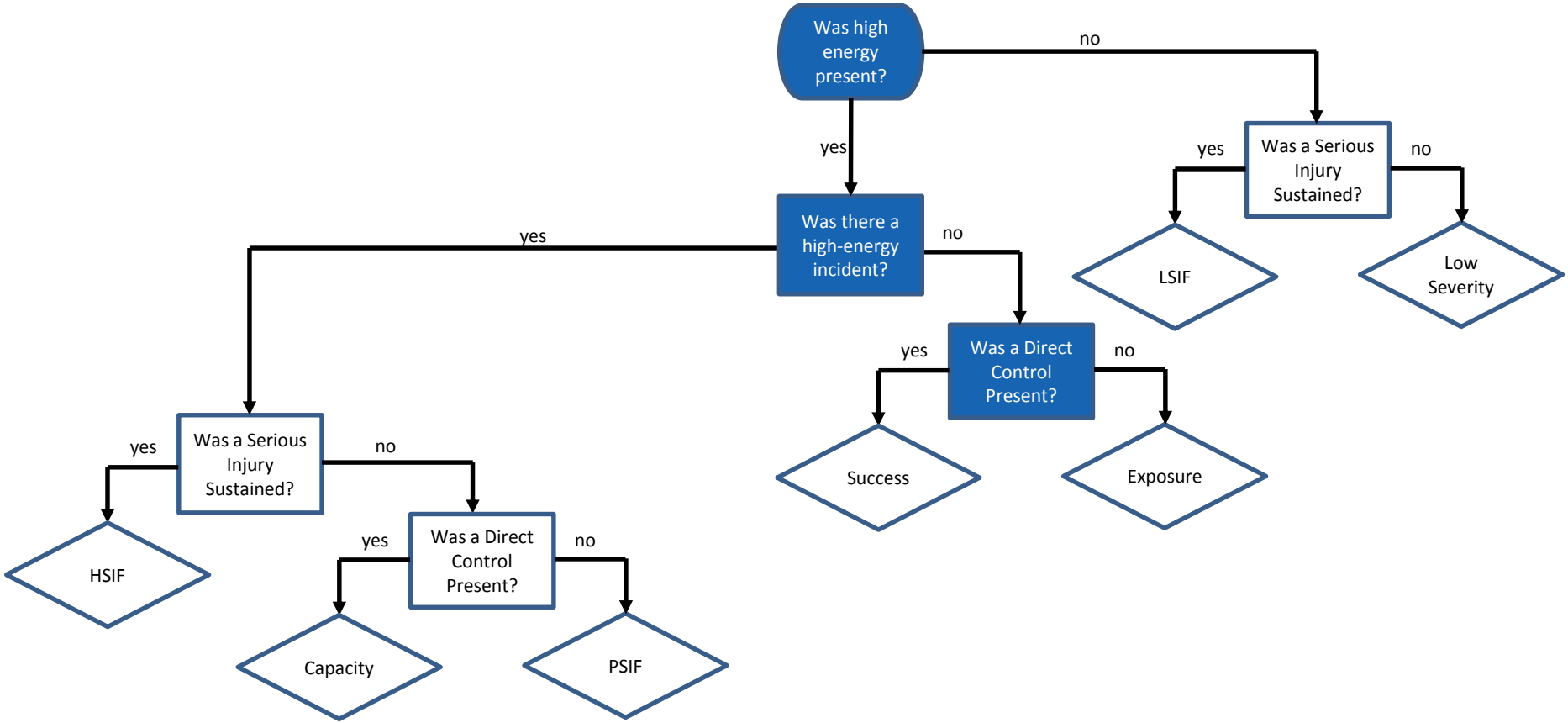
Examples of direct controls:

- LOTO/De-energization
- Machine guarding
- Hard physical barriers
- Fall protection
- Cover up on conduit

Examples that are NOT direct controls:

- Training
- Warning signs
- Hard hat
- Rules
- Cones
- Experience

*reduced to below 500 ft-lb threshold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Definitions

- **H-SIF:** Incident with a release of high energy in the absence of a direct control where a serious injury is sustained
- **L-SIF:** Incident with a release of low energy in the absence of a direct control where a serious injury is sustained
- **P-SIF:** Incident with a release of high energy in the absence of a direct control where a serious injury is not sustained **(Lucky)**
- **Capacity:** Incident with a release of high energy in the presence of a direct control where a serious injury is not sustained **(Prepared)**
- **Exposure:** Condition where high energy is present in the absence of a direct control **(Stop Work)**
- **Success:** Condition where high energy is present but is not released because of a direct control **(Ideal)**

SAFETY FUNCTION

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Phone: 303.704.8523

The **Edison Electric Institute** (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States.

In addition to our U.S. members, EEI has more than 60 international electric companies, with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

For more information, visit our Web site at www.eei.org.

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