

## Implosive devices used for transmission line construction

### What are implosive connectors?

Implosive connectors will be used in the construction of portions of the CapX2020 transmission line projects. This type of connector uses implosions to splice transmission conductor (wire) joints.

How it works is simple. A sleeve with a small, engineered implosive charge is wrapped around a specifically designed metallic sleeve. The charge creates an implosive compression, seamlessly joining the two conductor ends. The split second detonation creates a flash and a loud boom similar to the sound of a 12-gauge shotgun blast (about 110 decibels).

Implosive connectors produce a smoother, stronger and more electrically efficient connection. The connectors also can significantly reduce construction time, result in fewer environmental impacts and lower project costs.

### Benefits

Stringing transmission conductor using implosive connectors has numerous benefits, including:

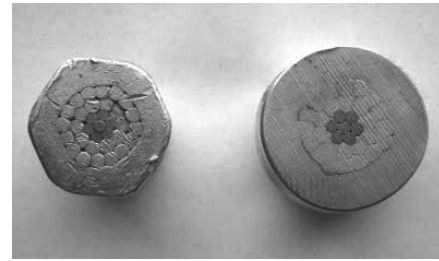
- Can be installed in all weather conditions, resulting in reduced installation time and lower project costs
- Smoother, stronger and more electrically efficient connection; virtually maintenance free
- Fewer environmental impacts – requires less heavy equipment in the field; fewer access roads in remote and rural areas
- Safe, successful track record and used in more than one million installations worldwide
- Multiple installations on dead-end structures can be done simultaneously, resulting in reduced installation time
- Can be installed on live transmission lines, which eliminates outage time



*The split-second detonation of implosive connectors creates a flash and a loud boom.*



Workers prepare an implosive connector for detonation.



old splicing technology (left), implosive splicing technology (right)

## Terms to know

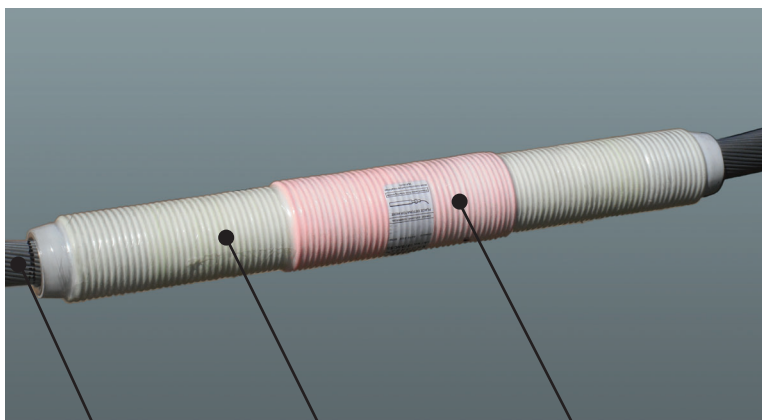
**Conductor:** A wire made up of multiple aluminum strands around a steel core that together carry electricity.

**Insulator:** An object made of a material like glass, porcelain or composite polymer that is a poor conductor of electricity. Insulators are used to attach conductors to the transmission structure and to prevent a short circuit from happening between the conductor and the structure.

**Dead end structure:** A structure used when a transmission line turns or ends. It's usually stronger and larger with a wider base.

**Implosive joining:** A sleeve with a small, engineered implosive charge wrapped around a metallic sleeve that creates a controlled implosive compression that seamlessly joins high voltage conductor.

**Sleeve:** There are two sleeves used during an implosion connection, a sleeve made out of metal and another that contains an engineered implosive charge.



CONDUCTOR METALLIC SLEEVE IMPLOSIVE ENERGY

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