

# Hydrogen Fuel Cell Backup Power Systems

For ITS Applications in District 2

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EMERGENCY  
PARKING  
ONLY

# Presentation Overview

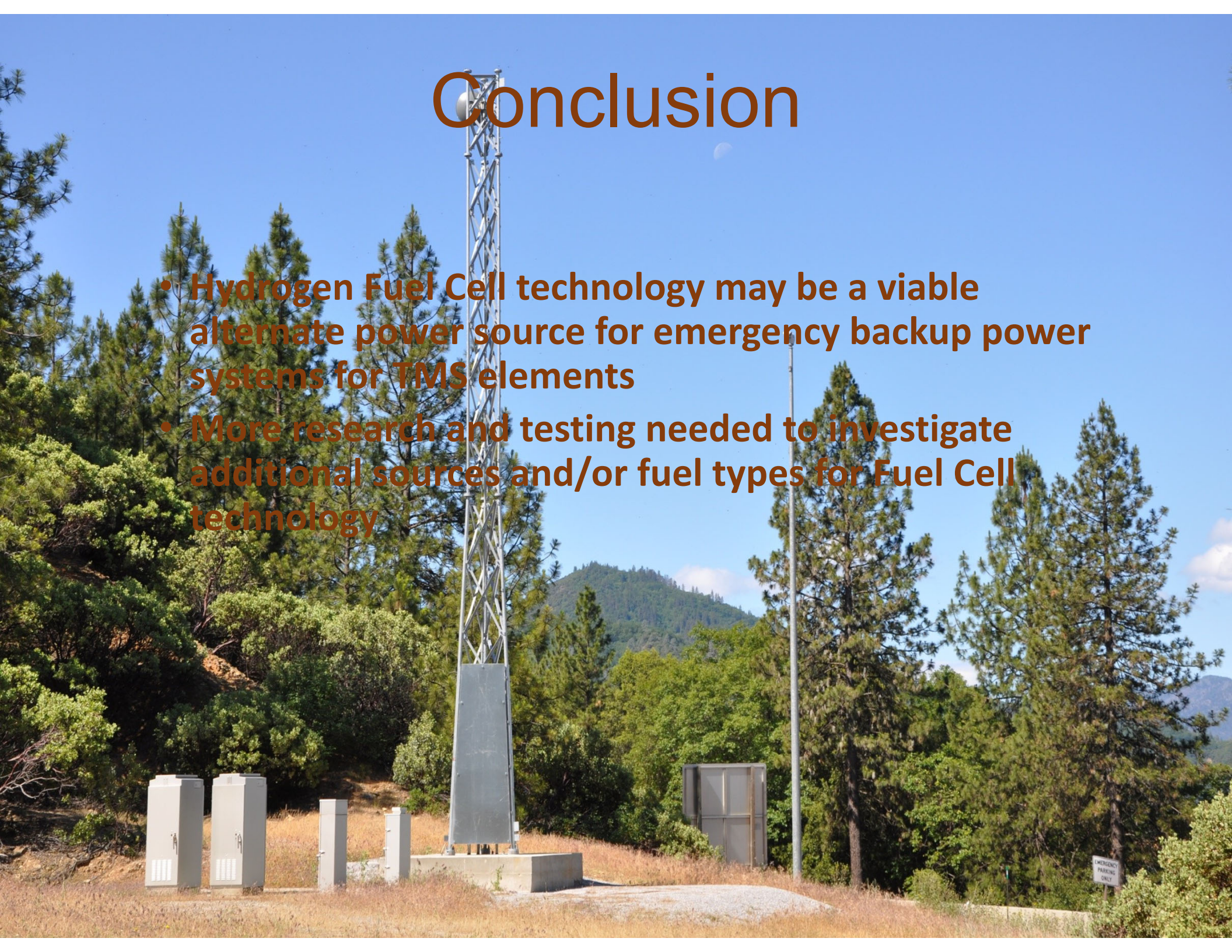
## Presentation Outline

- **Need and Purpose – Jeremiah Pearce P.E.**
- **Research Project – Dave Torick**
- **Caltrans METS/TransLab Requirements – Justin Ellis P.E.**
- **Next steps**



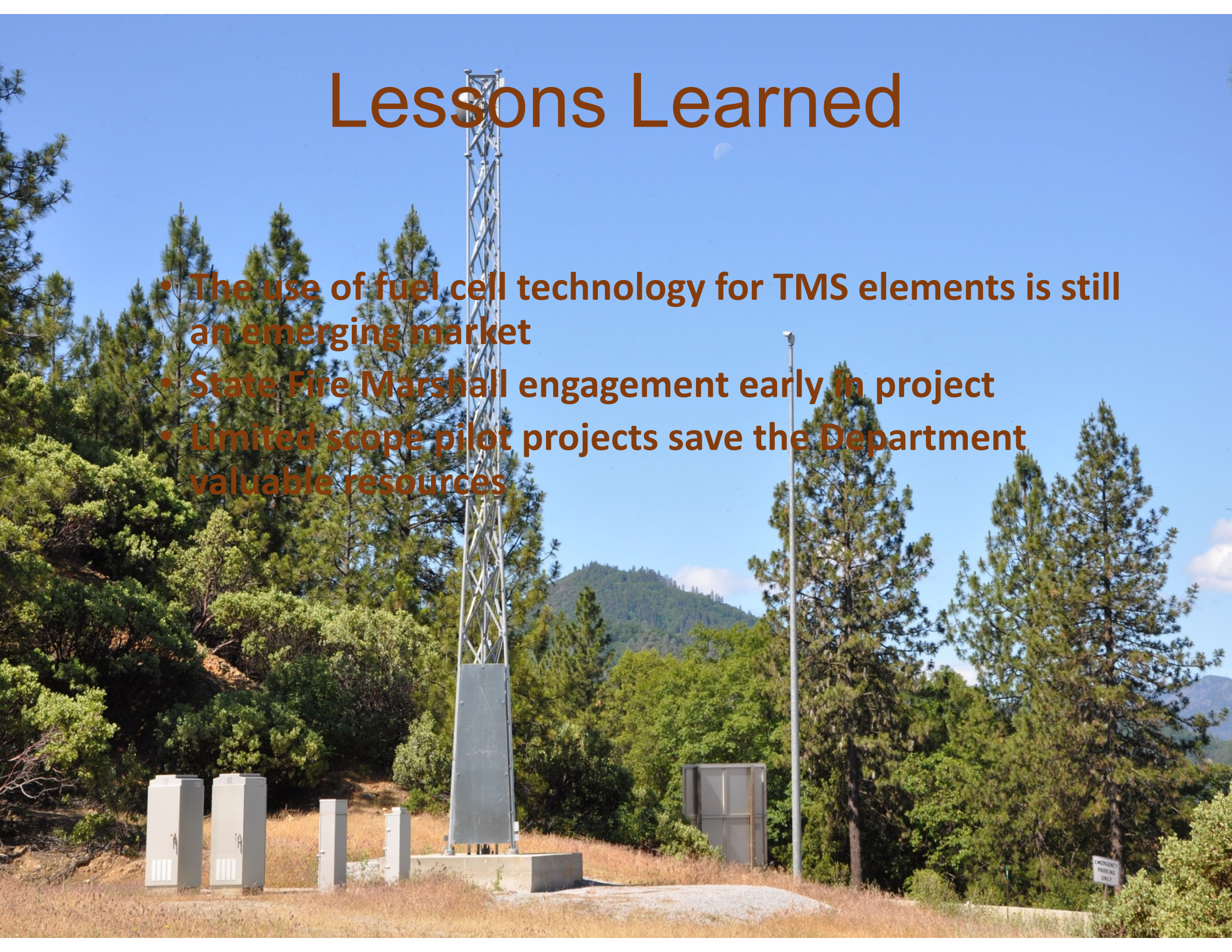
# Conclusion

- **Hydrogen Fuel Cell technology may be a viable alternate power source for emergency backup power systems for TMS elements**
- **More research and testing needed to investigate additional sources and/or fuel types for Fuel Cell technology**



# Lessons Learned

- **The use of fuel cell technology for TMS elements is still an emerging market**
- **State Fire Marshall engagement early in project**
- **Limited scope pilot projects save the Department valuable resources**



# Next Steps

- Investigate additional COTS hydrogen fuel cell technology sources
- Investigate additional fuel cell technology fuel types
- Initiate a limited scope pilot project to evaluate COTS fuel cell sources that could be a good fit for PSPS back-up power of TMS Elements



# Questions

