

MEETING THE CHALLENGES OF FLOODS AND BUSHFIRES – THE Energex EXPERIENCE



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Presenters: Colin Lee & Russell Gordon, ENERGEX

November 18th 2015

ENERGEX'S Footprint

Electricity distributor SEQ

\$12B+ assets

1.35M connected customers

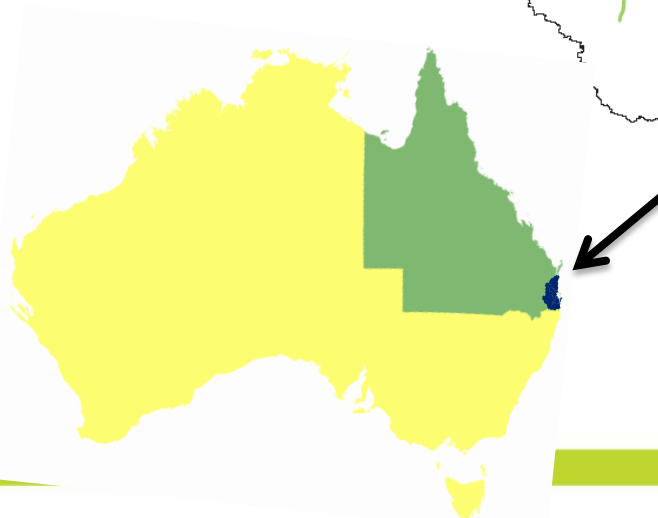
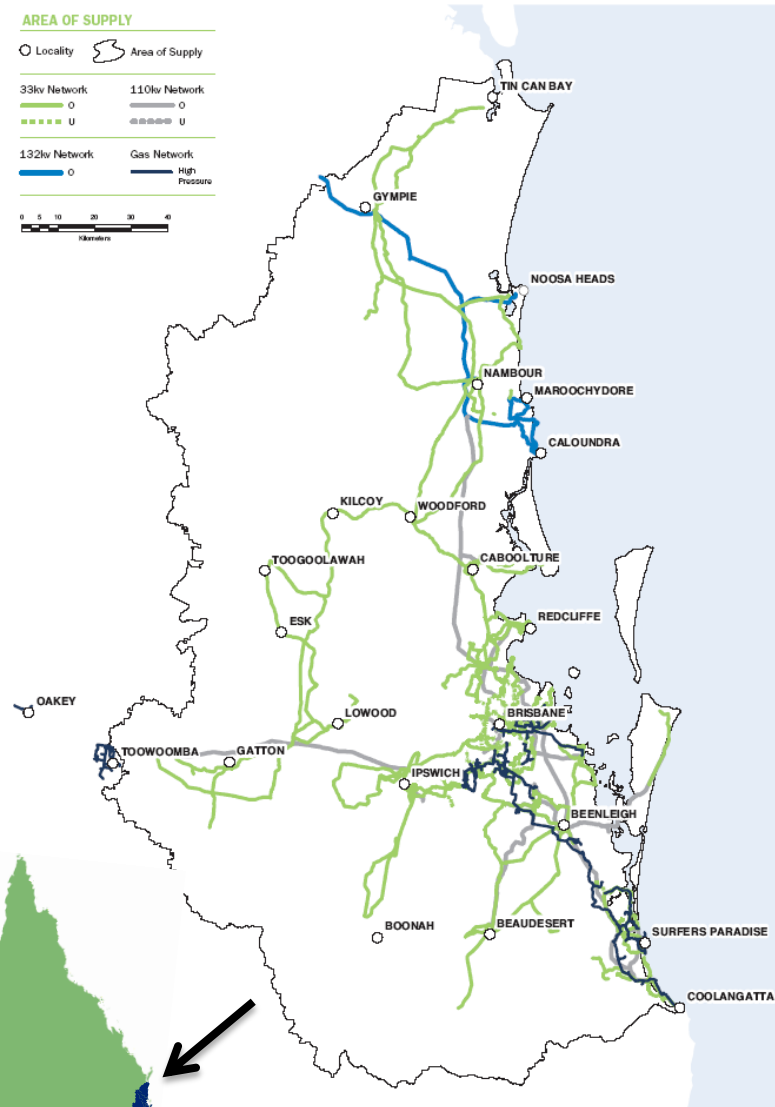
35,100km overhead lines

16,800km underground cables

660,000+ poles

282 substations

3,000 staff



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Outline of Presentation

Bushfire and Flood Risk Management Plans

Major Events

- 2011 Brisbane Floods
- Stradbroke Bushfires (Dec 2013)

How We Managed The Events

Key Lessons Learnt

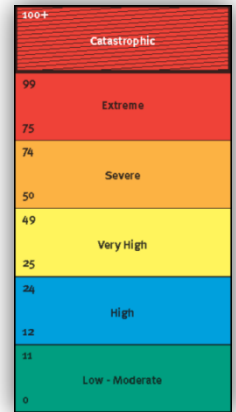
Bushfire – Experience in South East QLD



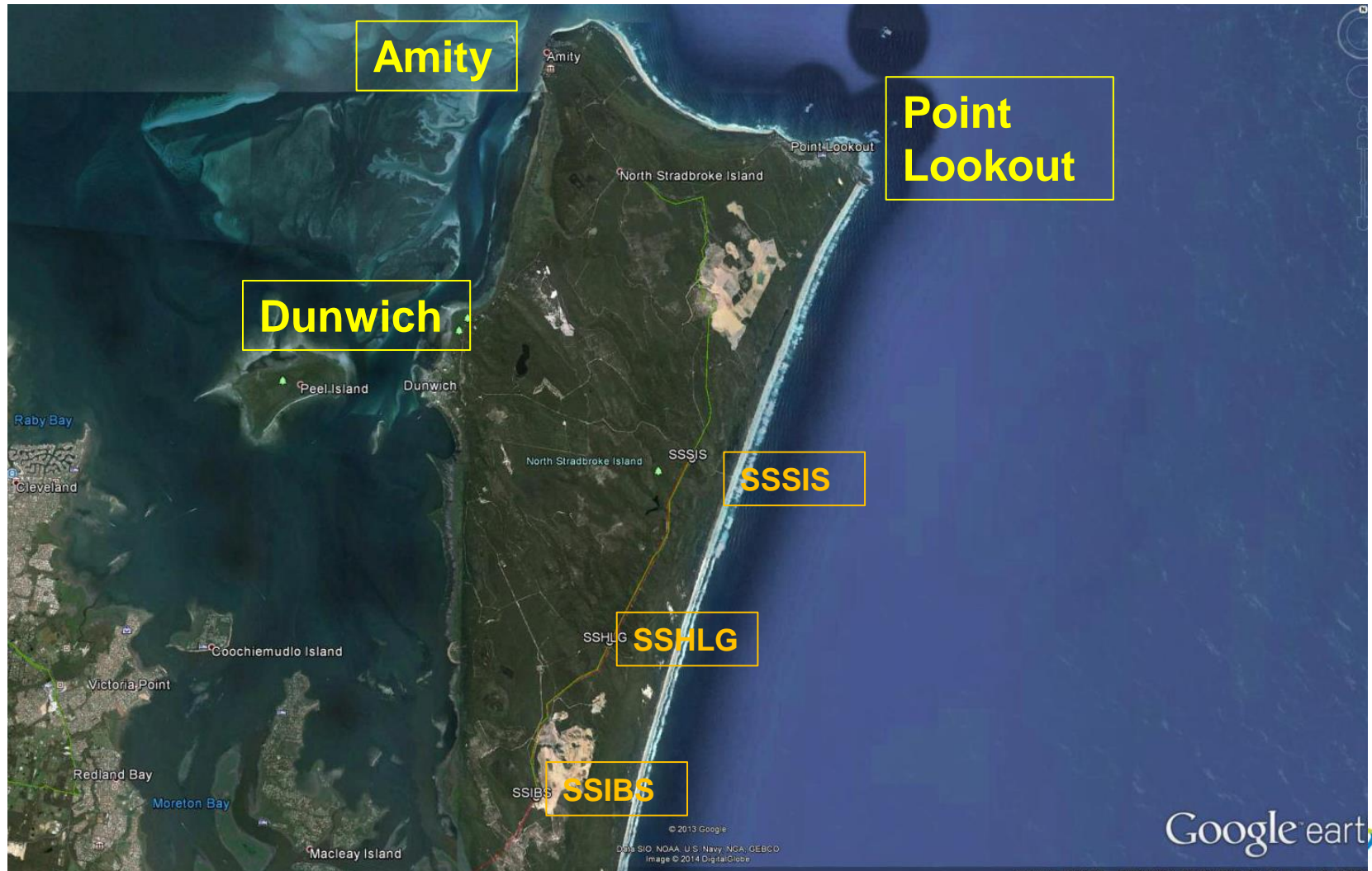
Energex Bushfire Risk Management Plan

The Bushfire Risk Management Plan is published on the Energex website, covers the following major areas:

- Identification and rectification of asset defects, particularly in high bushfire risk areas,
 - Asset maintenance procedures,
 - Vegetation management strategies and procedures,
 - Equipment and construction standards as related to bush fire mitigation
 - Operating procedures during times of high fire danger
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- Cooperation with local councils to reduce future conflict between trees and powerlines.
 - Long term plan in conjunction with the Queensland Fire and Emergency Service.



North Stradbroke Island – Electricity Network

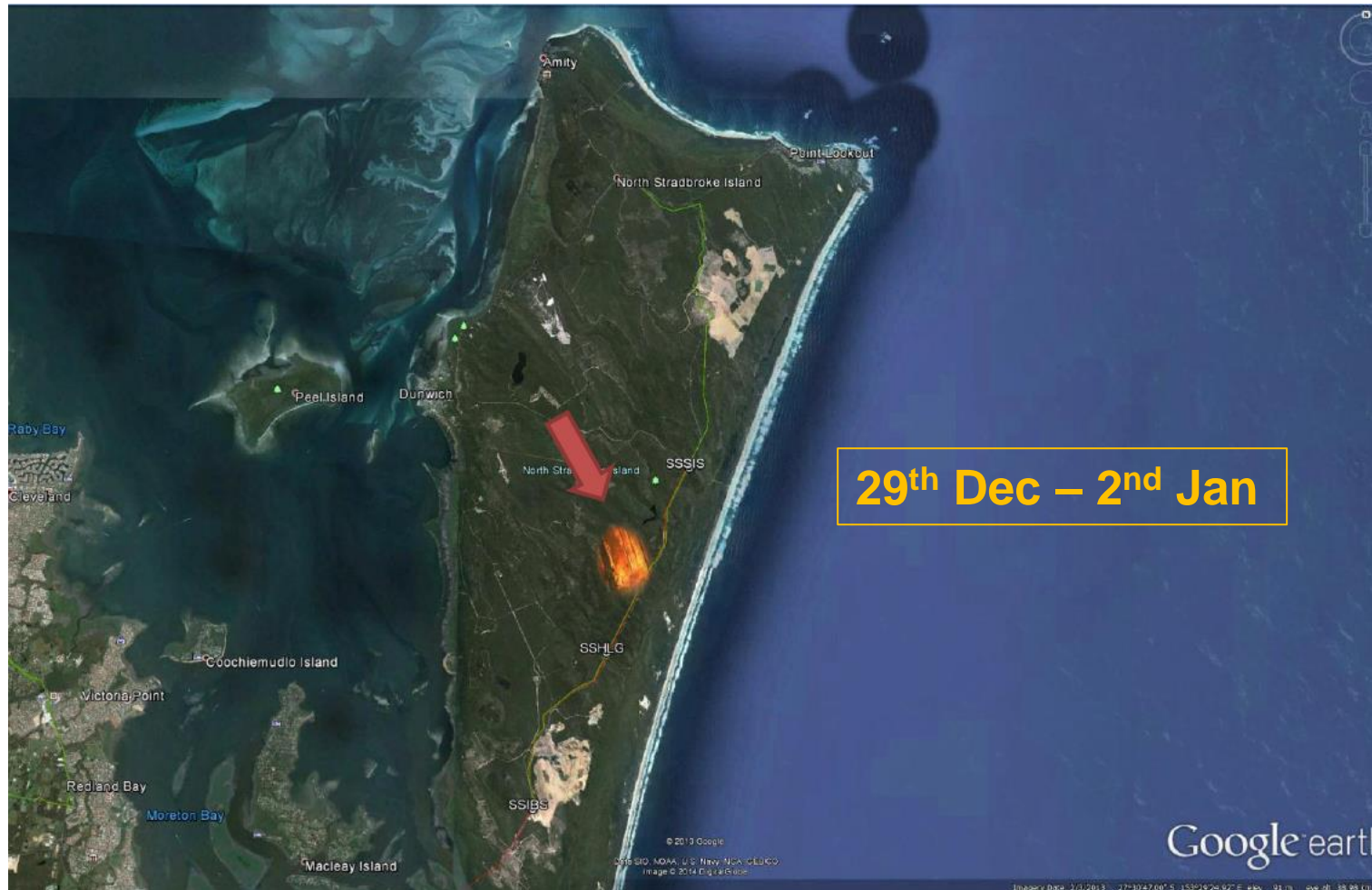


Google earth

energex

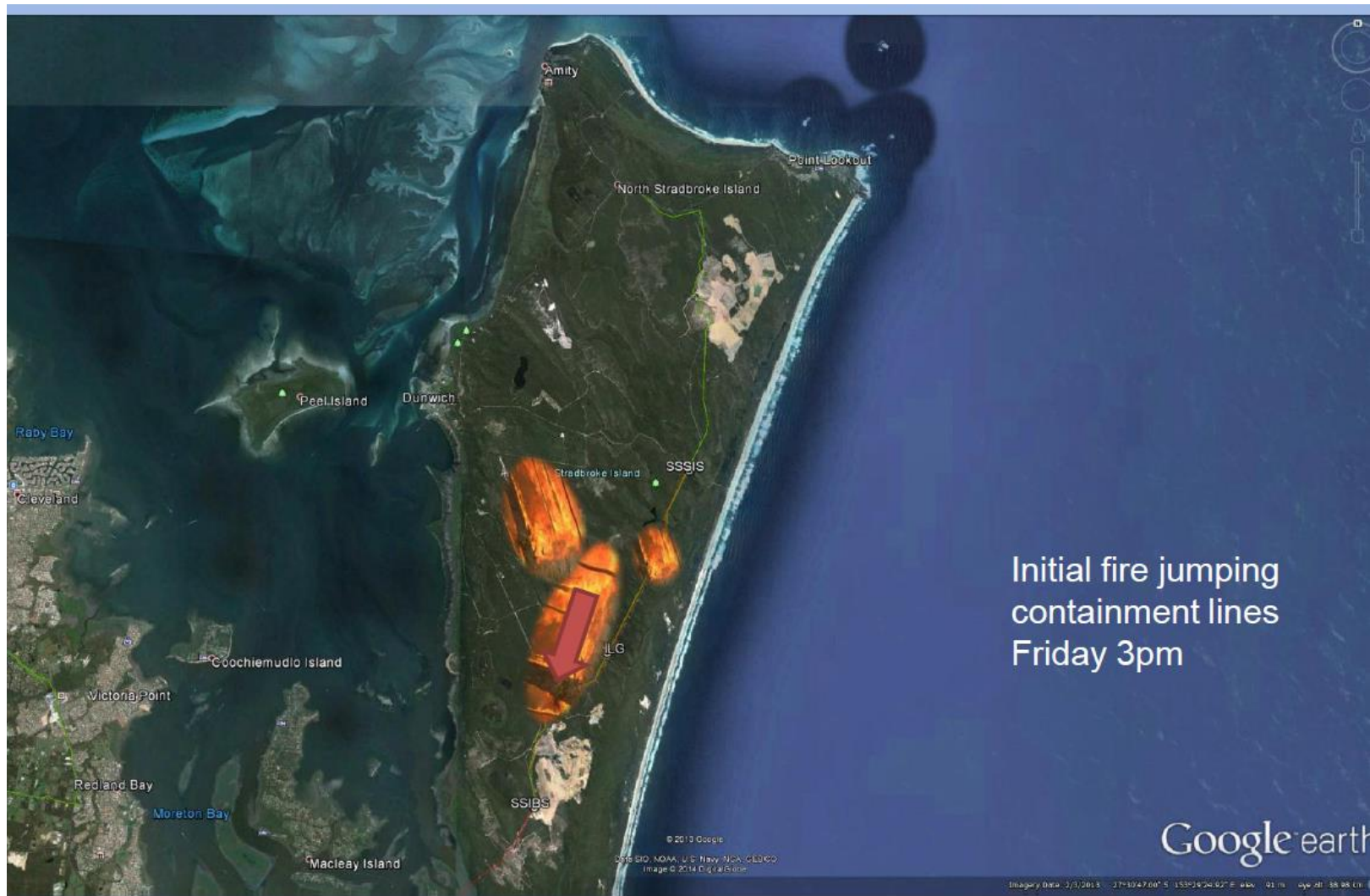
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North Stradbroke Island – Initial fire moving SE





North Stradbroke Island – 3rd January

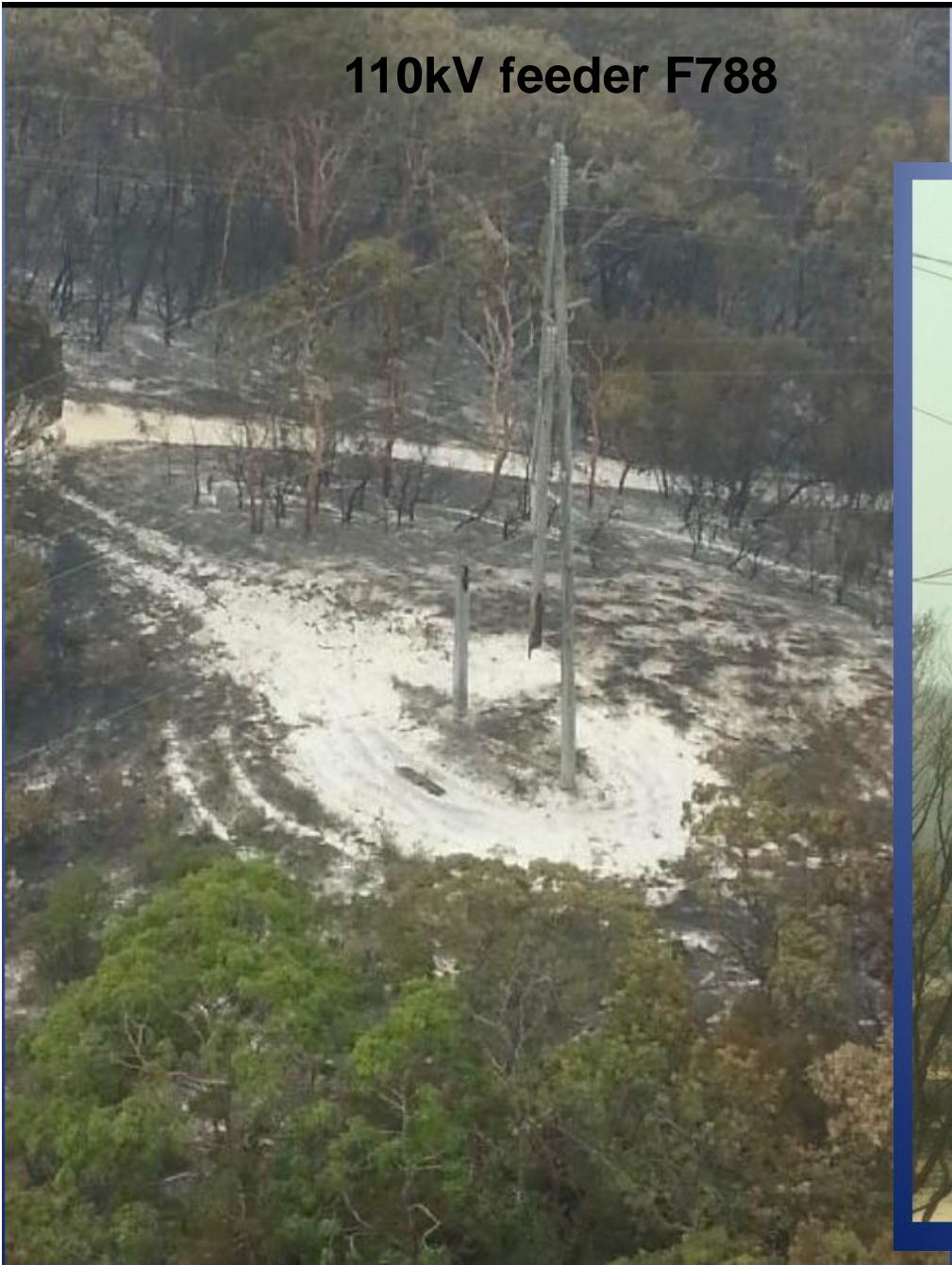


North Stradbroke Island – 2nd January



110kV feeder F788

North Stradbroke Is



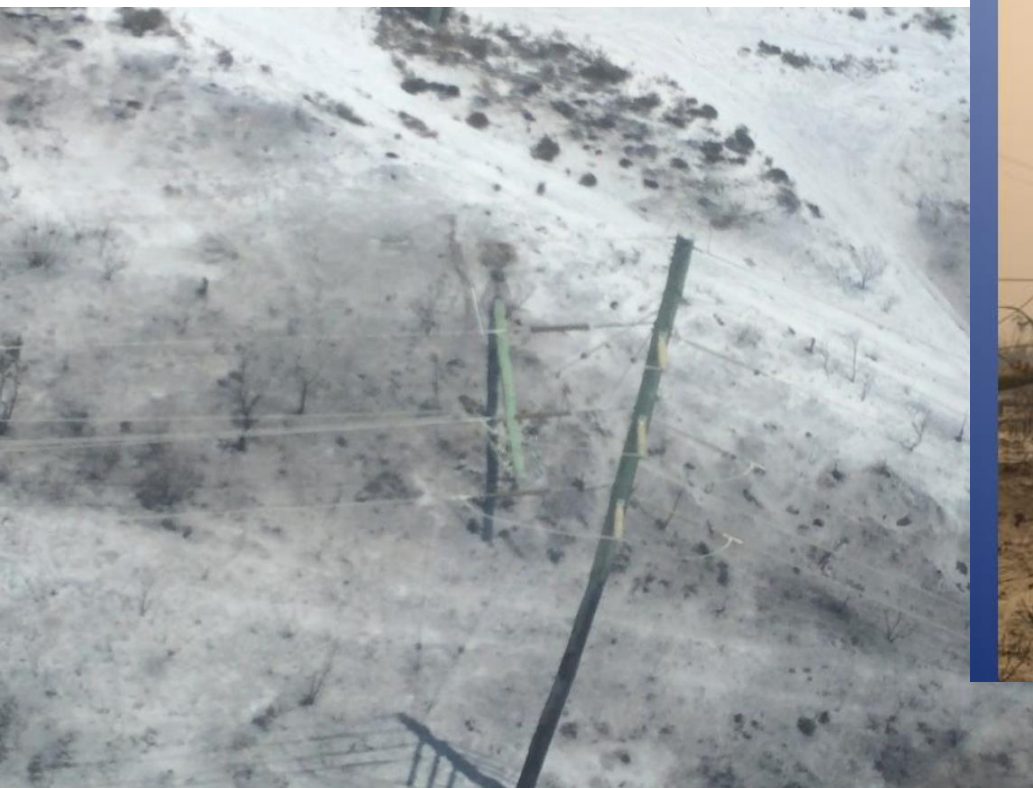
North Stradbroke Island – 2nd January

Mobile Control
Centre



Public
Meeting,
Point
Lookout

North Stradbroke – Network Issues



No



Stradbroke Island Bushfires – December 2013

- Bushfires sparked by lightning on Sunday, 29 December 2013, lasting 6 days
- Middle of peak tourist season
- Fire direction kept changing – impact on planning and logistics
- Most significant in twenty years of Stradbroke's history – devastating sixty per cent of the uninhabited areas of the island.
- Significant damage to vegetation and essential services (water and electricity)
- Communication & travel was difficult in many areas, with smoke and flames obscuring road access (fire continued during rectification efforts).
- Escorts to the fault sites where necessary to ensure our safety.
- Repair equipment and items brought in to replace 20 poles and damaged assets, including 110kV poles, 33 and 11kV poles, transformer and crossarms, conductor etc.
- Nine generators (four 1MW generators and five 500kVA) were also on board to ensure temporary supply to residents and businesses. Complete island fed from generation
- Many fire restarts occurred: very sandy landscape, water applied to burning pole, dried out rapidly and reignited.



Bushfire Response

- Up to 100 staff responded (40-50 on island at any one time)
- Energex resources on the island are a small un-manned depot and storage facility
- Logistics issues getting Energex service vehicles to the island due to size and weight ie. semi trailer pole trucks, generators, borer lifters and EWP's (particularly during peak holiday traffic)
- Initially very little accommodation and resources to support 100 staff members (conflict with holiday makers)
- Required support from multiple tracked vehicles due to burnt out and blocked tracks and heavy plant equipment
- Constant recall from sites due to changing fire conditions
- Time taken to design and connect portable generation (35,000 litres of diesel required for generators)
- Restoration took 5-7 days with almost two months of follow-up work to completely repair network

An Energex generator is loaded on to the barge destined for North Stradbroke Island



North Stradbroke Island after the blaze



Excavators were used to drag both trucks and poles into position for repair work



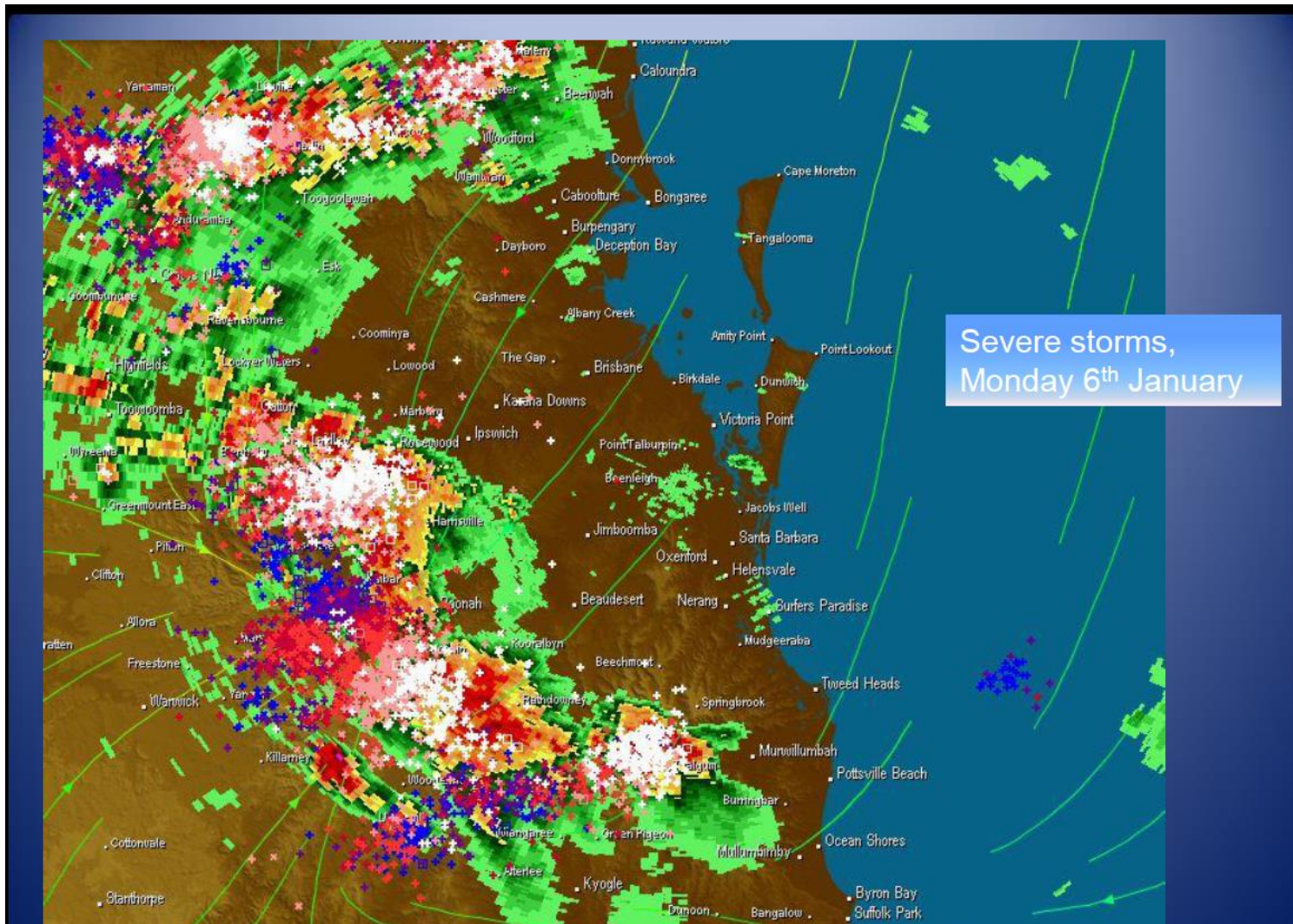
Our truck back-dropped by a fiery Stradbroke Island



Lessons Learnt

- Improvement to bushfire risk management plan
- Helicopter strategy
- Training / experience of “key” roles, and adherence to documented process
- Strong leadership and develop restoration strategy and stick with it
- Effective and regular communications to all internal staff / contractors / community
- Adequate stock levels of critical materials
- Strong media attention and response
- Use of social media – clear messaging to public and stakeholders
- Develop restoration strategy and stick with it
- Design of connection points for Generators
- Procedures for worker safety around bushfire damaged poles
- Resourcing for a fire event / barge arrangements support and accommodation services
- Fleet policy – 4WD EWPs, excavator contracts and light AWD vehicles





Support agencies

SEQ Fire and Biodiversity Consortium - www.fireandbiodiversity.org.au

The South East Queensland Fire and Biodiversity Consortium (SEQFBC) aims to translate science into practice for improved fire management and biodiversity conservation in SEQ through education, research and representation with private land holders and public land managers. The SEQFBC is hosted by SEQ Catchments and supported by 16 organisations. Key aims of the SEQFBC include assisting land managers and private landholders with practical information on biodiversity and fire management (i.e. recommended fire regimes); and translating fire science into useable formats (e.g. fact sheets, workshops). The most popular services are the biannual forums, “Recommended Fire Regimes” fact sheet and Fire Management Planning Workshops for private landholders. Workshops are delivered in partnership with local government and the RFSQ. Participants are guided through the development of a fire management plan, complete with property maps.