

ONESTEP POWER SOLUTIONS INC.

We Stop Blackouts.

DP Shuttle Tankers
2024

**ONESTEP
POWER**



OUR MISSION

*Independent assurance to accelerate
the future of clean power.*

OUR VALUES

Safe Solutions

Technical Excellence

Trusted Service



INTRODUCTION TO ONESTEP POWER

Independent validation & verification to help you:

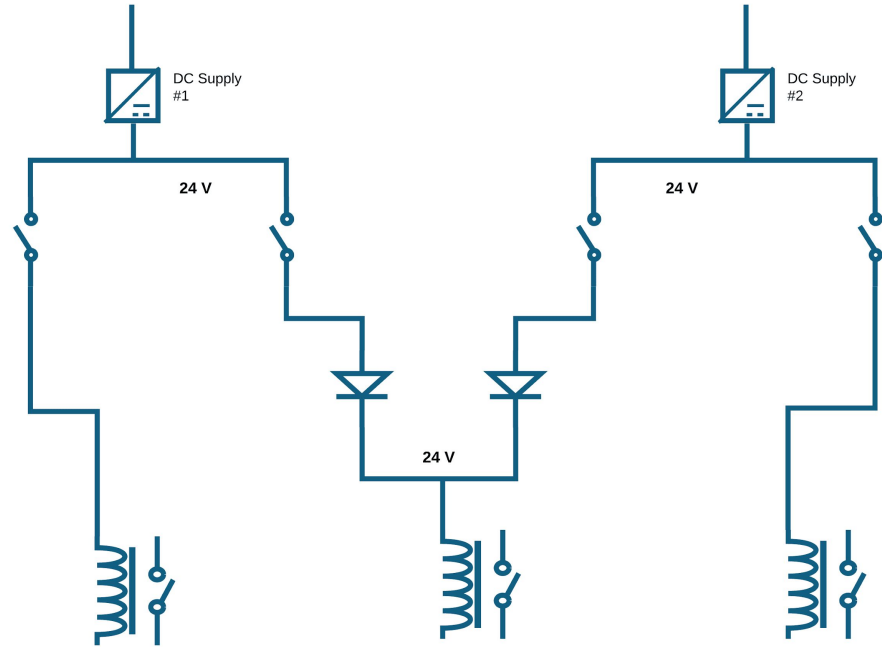
1. **STOP BLACKOUTS:** Ensure operational safety
2. **GO GREEN:** Simplify the energy transition
3. **GET ON CONTRACT:** Get to work, fast

An integrated, technology-based approach to
Verification & Validation of power technologies.



CONTROL SYSTEM CROSS CONNECTIONS - DEFINED

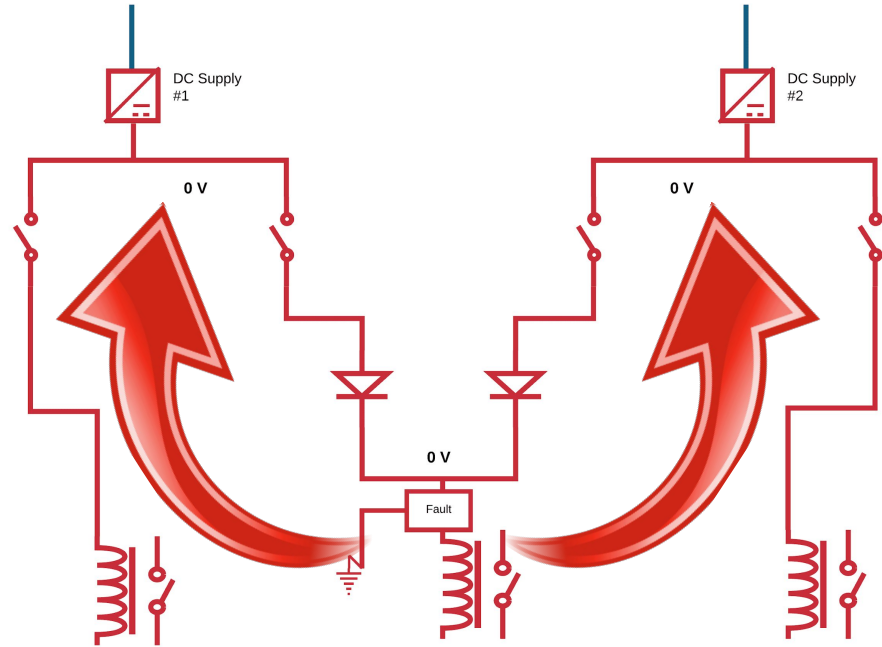
1. Control system cross-connections exist as part of increased reliability on DP control system.
2. The opportunities for single failures decreased.
3. OCIMF identified potential for fault to propagate



Dynamic Positioning Failure Mode
Effects Analysis Assurance Framework
Risk-based Guidance
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CROSS CONNECTIONS - THE RISK

1. Traditional isolation methods:
 - a. Risk of low likelihood, high severity failures.
 - b. Diodes do not eliminate voltage dip.
2. Modern power supplies may not supply sufficient fault current.
3. Adding more power supplies takes space, time and money.



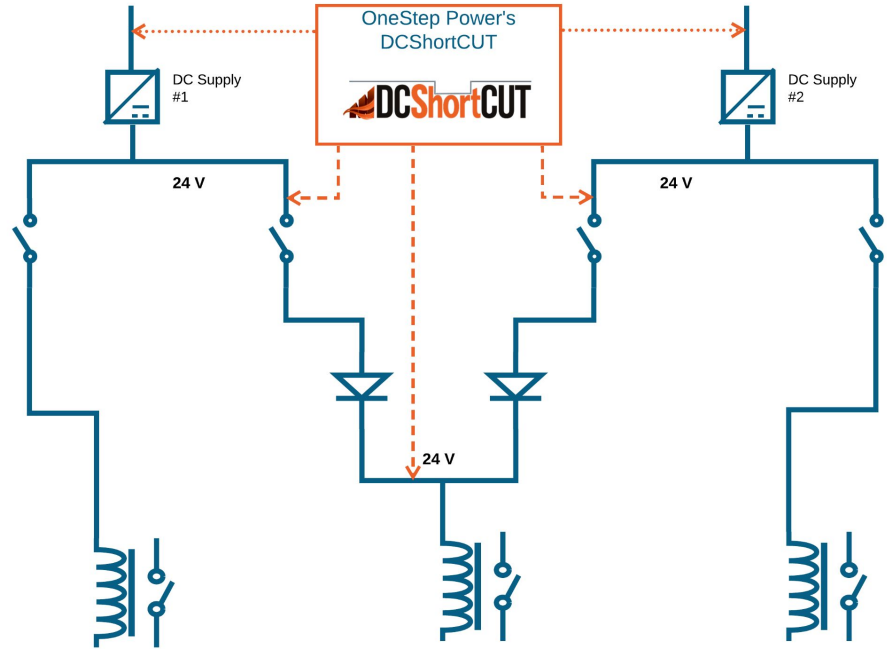
CROSS-CONNECTIONS

DP Shuttle Tankers

- ★ Client-driven requirements
 - Matched to OCIMF, Shell & Petrobras cross-connection testing requirements
- ★ Quick
 - Generally 2-3 days onboard
 - Can perform in Transit (on DP)
- ★ Data-driven
 - Automated assessment of results
- ★ Reduces isolation checklists

ONESTEP POWER'S DCSHORTCUT

- Temporary Installation
- Keeps personnel clear of testing
- Repeatable tests
- Clear pass/fail criteria
- Vessel protections remain “as-is”
- Invisible to the vessel
- Responses are real fault responses



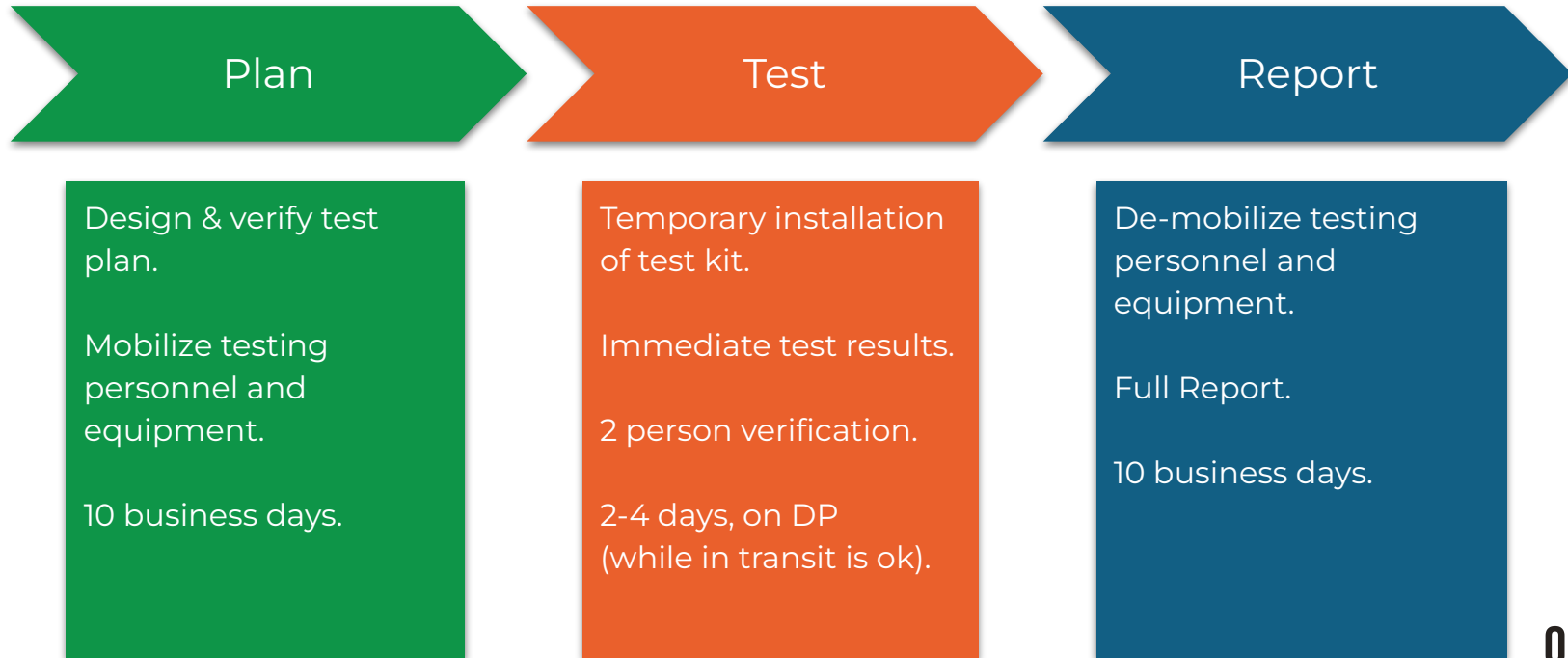
ONESTEP POWER'S DCSHORTCUT

DCShortCUT Failure Mode Matrix	Downstream of PSU1	Downstream of PSU2	Downstream of PSU1 & PSU2 simultaneously	Between protections & load
Load Increase	★	★		★
Overload	★	★		★
Short Circuit	★	★	★	★
Short to Ground / Earth Fault	★	★	★	★
Variable over-voltage (max 120%)	★	★		★
Loss of Power Supply	@ PSU1	@ PSU2		



WHAT IS THE PROCESS?

ShortCUT Projects



AFTER THE FINAL REPORT

Additional Support

- Contract Acceptance Support
- Power & Alarm Monitoring
- Power Engineering Support
 - Updates to manuals
 - Answering Charterer questions
 - Closed bus workshops & risk assessments
- Incident Investigation
- Annual Power System Reviews



THANK YOU!

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