




Operations and Maintenance Plan

(Insert Project Name Here)

Site Procedure




Date


 BABCOCK & BROWN POWER OPERATING PARTNERS	(Project) Site Procedure [Turbine Type]	Revision No.:
	Prepared By: (Operations Manager) / (Project Site Manager)	Revision Date:
	Approved By: (Asset Manager)	Issued Date:

Site: Location: Site capacity: Interconnect: Turbines: Turbine Capacity: Turbine Contractor: Warranty Period:
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Role	Company	Name	Office	Cell	Home	Fax
Equipment Contractor						
Project Manager	Babcock & Brown					
BBOCC	Babcock & Brown					
Interconnect						
Transmission Provider						
High Voltage Repair						
Oil Sample Contractor						
VAR/Voltage Control Contractor						
Road Contractor						
Ring Down/Lease Lines						
Fiber Optic						
Met Tower Repair						
SCADA Repair						
T1 Line						
Turbine GBOX Oil Sampling						
Safety						
Trash Removal						
Building Handyman						
Septic Sewer						

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Role	Company	Name	Office	Cell	Home	Fax
Local Sourcing						
Industrial Supply						
O&M Building Warranty						
Spills / Oil Recycling / Hazardous Waste Disposal						
O&M Building Power						
Rentals / Telehandler Service						
Substation Propane						
Farm & Ranch Supply						
Rugs & Office Supplies						

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Definitions

After Regular Working Hours-- Commenced upon the last phone call made by Site Personnel to BBOCC; ends upon the first phone call Site Personnel makes to BBOCC, Monday through Friday. Contact BBOCC at (Insert Phone Number), if no answer, BBOCC emergency cell is (Insert Phone Number) or email (Insert e-mail).

Call Outs-phone call made to Site Personnel on standby to notify of a turbine fault.

Downtime Allocation- A designation given to the BBOCC by Site Personnel upon initial communication that a turbine has faulted.

Field Technician- Any person onsite employed directly or indirectly to perform services at (Insert Wind Farm Name) on behalf of B&B or a third party contractor. The terms Field Technician and Site Personnel shall be used interchangeably.

Field Technicians on Standby-Person(s) assigned to answer during After-Hours Coverage should an issue arise.


Local Fault- A turbine fault that cannot be reset remotely by BBOCC either due to the nature of the fault or contractual obligations with Site Personnel. Resetting by BBOCC can void turbine manufacturer warranty and must be avoided at all times.

Regular Working Hours – Commences upon the first call made by first arriving Site Personnel to BBOCC, ends upon the last phone call Site Personnel makes to BBOCC, Monday through Friday. BBOCC contact (Insert Phone Number) if no answer, BBOCC emergency cell is (Insert Phone Number) or email (Insert e-mail).

Remote Fault- A turbine fault that can be reset remotely by BBOCC based on Reset Error Code List provided by turbine manufacturer. Resetting a turbine for a fault not listed on the turbine manufacturer error code list can void the turbine warranty and must be avoided at all times.

Standby Call List- List provided to BBOCC of Field Technicians on call.

Site Personnel- Any person onsite employed directly or indirectly to perform services at (Insert Wind Farm Name) on behalf of B&B or a third party contractor. The terms Field Technician and Site Personnel shall be used interchangeably.

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Shut Downs and Start Ups

(Insert name of Equipment Contractor) will call the OCC to have the turbine stopped and the proper downtime allocation noted. Once this has been updated the OCC will give a release to run command and the technician will enter the turbine and put it in manual stop/repair so they can work on it. The BBOCC will be notified of all turbine activity and can be contacted at (Insert Phone Number), BBOCC emergency cell is (Insert Phone Number) or email at (Insert e-mail).

Regular Working Hours

Regular Working Hours will commence upon the first call made by first arriving Site Personnel to BBOCC, ends upon the last phone call Site Personnel makes to BBOCC, Monday through Friday. Site Personnel will contact BBOCC at (Insert Phone Number), radio to phone network. BBOCC will confirm Site has called in by checking the Call-In log, prior to acting under procedures specified under “Regular Working Hours”.

CALL-OUTS ARE REQUIRED FOR ALL FAULTS THAT CANNOT BE REMOTELY RESET.

ADD ANY OTHER EQUIPMENT-SPECIFIC NOTES HERE.


Local Faults

BBOCC will contact on Contact On-Call Personnel at (Insert Phone Number) **Working Hours Office / (Insert Phone Number) Working Hours Site Cell** for ALL local faults occurring during Regular Working Hours.

Once technicians arrive at the faulted turbine, they are to contact BBOCC for LOTO Clearance prior to commencing to troubleshoot.

- **Site Personnel must notify BBOCC (Insert Phone Number) before commencing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at (Insert Phone Number).**
- **Site Personnel must notify BBOCC (Insert Phone Number) after completing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at (Insert Phone Number).**

If On-Call Personnel are not reached, a voicemail will be left and BBOCC will contact Site Supervisor, if not reached a voicemail will be left and BBOCC will call Project Manager, if not reached a voicemail will be left and BBOCC will continue calling all mentioned until someone is reached.

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Remote Faults

BBOCC will contact Site Personnel at (Insert Phone Number) **Working Hours Office** / (Insert Phone Number) **Working Hours Site Cell** and notify of a Remote Reset and ask if BBOCC will reset or if they will troubleshoot the WTG.

If they elect to troubleshoot, once technicians arrive at the faulted turbine, they are to contact BBOCC for LOTO Clearance prior to commencing to troubleshoot.

- **Site Personnel must notify BBOCC** (Insert Phone Number) **before commencing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at** (Insert Phone Number).
- **Site Personnel must notify BBOCC** (Insert Phone Number) **after completing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at** (Insert Phone Number).

If Site Personnel are not reached, a voicemail will be left and BBOCC will contact Site Supervisor, if not reached a voicemail will be left and BBOCC will call Project Manager, if not reached a voicemail will be left and BBOCC will continue calling all mentioned until someone is reached.

After Regular Working Hours

After Regular Working Hours commence upon the last phone call Site Personnel makes to BBOCC; ends upon the first phone call Site Personnel makes to BBOCC, Monday through Monday. Site Personnel will contact BBOCC at **(Insert Phone Number)**, radio to phone network. BBOCC will confirm Site has called in, by checking the Call-In log, prior to acting under procedures specified for “After Regular Working Hours”.


CALL-OUTS ARE REQUIRED FOR ALL FAULTS THAT CANNOT BE REMOTELY RESET.

ADD ANY OTHER EQUIPMENT-SPECIFIC NOTES HERE.

Local Faults

BBOCC will contact on Contact On-Call Personnel at (Insert Phone Number) **After Hours** / (Insert Phone Number) **Working Hours** for ALL local faults occurring After Regular Working Hours, and any down turbine after hours.

Once technicians arrive at the faulted turbine, they are to contact BBOCC for LOTO Clearance prior to commencing to troubleshoot.

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- **Site Personnel must notify BBOCC (Insert Phone Number) before commencing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at (Insert Phone Number).**
- **Site Personnel must notify BBOCC (Insert Phone Number) after completing any work. In the event phone lines are out, Site Personnel must call BBOCC Emergency cell at (Insert Phone Number).**

If On-Call Personnel is not reached, a voicemail will be left and BBOCC will contact Site Supervisor, if not reached a voicemail will be left and BBOCC will call Project Manager, if not reached a voicemail will be left and BBOCC will continue calling all mentioned until someone is reached.

Remote Faults

BBOCC will remotely reset all Faults found in the Remote Reset Fault List provided by the Manufacturer, After Regular Working Hours.


FAA Light Failure Notification Procedure

Conspicuity is achieved only when all recommended lights are working. Partial equipment outages decrease the margin of safety; any outage should be corrected as soon as possible however failure of a steady burning side or intermediate light should be corrected as soon as possible, but notification is not required.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately by calling (Insert Phone Number) so a Notice to Airmen (NOTAM) can be issued.

When reporting, please have available:

- Identify yourself by name and title
- Identify the organization: Babcock and Brown on behalf of (Insert Wind Farm Name)
- Identify the site location
- Type of structure that has the light out (Wind Turbine or Meteorological Tower).
- Location of structure (including latitude/longitude, if known, prominent structures, landmarks, etc...refer to Coordinate List)
- Height of structure(s) above ground level or above mean sea level.
- The expected RTS (Return To Service) date.

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- FCC Antenna Registration Number (for structures that are regulated by the FCC)
The FCC advises that noncompliance with notification procedures could subject its sponsor to penalties or monetary forfeitures

Example. "Hi, this is John Smith BBOCC Operator calling on behalf of ABC Wind Project. I am calling to report an FAA light failure at the site which is located at 40002 Tusil Rd., Anywhere, CA, 12345. The light on Turbine 21 is out. The exact location of Turbine 21 is -116°19'49.92 by 32°42'25.70. The altitude of the structure is 4,500 feet. The expected return to service date is unknown at this time."

Project Manager is responsible for contacting BBOCC with confirmation that all FAA lights are functional upon RTS. BBOCC is responsible for calling (Insert Phone Number) as soon as normal operations are restored, to extend the outage date, or to report a new return to service date.

SCADA Down

In the event of a T-1 line outage BBOCC will request Site Manager or designated Personnel to monitor the Project Locally to ensure the project maintains operations within the Regional Regulatory Council's response time until the T-1 line is back in service and BBOCC has re-established connection.

Power Outage


BBOCC will refer to BBOCC Operations Procedures.

Contacting the Utility

Interconnect Agreement:	
Substation name:	
Transmission Provider Emergency Contact:	
Real Time Switching Operations:	

Switching Procedure

1. BBOCC or Utilities will call Site Manager in case of outage.
2. BBOCC contacts **(Insert Utility Name)** to verify whether the outage occurred on their side or our side.
 - a. If on their side, (Insert Utility Name) will troubleshoot the problem and contact BBOCC to get authorization for energizing the **(Insert Utility Name)** breaker.

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- b. If Faulty occurred on the (Insert Substation Name) Site Manager will then inspect. If no irregularities are found then the Project Manager will inspect the collection system, junction boxes, switchgears etc.
 - c. If the fault is on the (Insert Substation Name) of the project then the Project Manager will inspect the collection system, junction boxes, switchgears etc.
3. Once the (Insert Utility Name) energizes their (Insert Substation Name) XXXkV breaker, the Site Manager will contact the On-Call Personnel to explain the situation and that turbines may need to be repaired after the outage.
4. After all high voltage components have been inspected. The Site Manager calls the On-Call Personnel to meet the Site Manager at the substation for back up, in case of an emergency. The On-Call Personnel will have an Emergency Action Plan phone number in their possession, in case of an emergency.
5. The Site Manager and or the on-call Technician must contact the Site Personnel to get clearances from any Technicians that may or may not be in the field.
6. After Site Manager is given clearance from BBOCC **and** the Utility, he will energize the (Insert Substation Name).
7. Then the On-Call Personnel will call Technicians back and give them permission to start resetting turbines.

BBOCC Phone Lines Down


In the event telephone communication to BBOCC temporarily ceases, Site Personnel must dial BBOCC Emergency Cell (Insert Phone Number) to obtain LOTO clearances and/or communicate with BBOCC. In the event cell phone is not functioning, Site may contact BBOCC Supervisor as needed during daytime hours at **(Insert Phone Number)**, if no answer, **(Insert Phone Number)**.

If email communication is functional, an email notification will be sent out alerting Project Managers of the event and estimated RTS, is known.

Temporary Site Procedures

Temporary procedures are created when the Site Manager, or appointed designee, submits to BBOCC with a cc to BBOCC Supervisor and Operations Manager a Temporary Procedure Form notifying them of a special circumstance involving a temporary change to an existing Site Procedure.

The temporary site procedure must be printed by the Operator on shift and put in the *Temporary Site Procedure* binder. The Operator on shift must confirm via email that procedure has been placed in binder and place a temporary **red** dot on the respective site monitor screen for visual notification.

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When a shift change occurs, the relieving Operator must be informed of any temporary procedures by the on-shift Operator.

When the temporary site procedure is no longer required, the Site Manager, or appointed designee, will email BBOCC and cc BBOCC Supervisor and Operations Manager to advise. Operator on shift is to remove the red dot from the site monitor screen and remove the temporary procedure from the *Temporary Site Procedure* binder.

- **Operators cannot operate under verbal or email instruction which alter an existing procedure.** A telephone call is not an acceptable form of notification for any change to an Operating Procedure. A temporary Procedure Form is required for temporary change to take place.
- Operators cannot remove a temporary site procedure unless a Temporary Procedure Form is received with Part B completed. A telephone call is not an acceptable form of notification for any change to an Operating Procedure.

Sabotage or Suspected Sabotage

Site Personnel will Inform BBOCC of the suspected sabotage and ask BBOCC to report the incident to the Control Area and to the nearest FBI Office per the BBPOP Sabotage Reporting Procedure. Site personnel will call **911** to contact the appropriate local law enforcement authority.

Emergencies

Call **911** to contact appropriate Emergency Response Personnel, ensure that you give the correct location. Refer to your site's Emergency Action Plan to ensure to fastest possible response. Also give the responders as much information as possible about the incident.

In the event that someone requires “non emergency” medical attention while on site, refer to the Site Safety Manual.

All near-misses, incident, and accidents, **must** be reported to the Project Manager--immediately

BBOCC contact: (Insert Phone Number), if no answer, BBOCC Emergency Cell is (Insert Phone Number). BBOCC Supervisor contact numbers are **(Insert Phone Number)** during daytime hours and **(Insert Phone Number)** during off-hours.