

Emergency Response Plan SunAlta Solar PV One Project

PROJECT LOCATION

Project Site: **NE 17 20 17W4**

Address and Main Entrance: **202082 RR174, Newell County, Alberta**

PURPOSE

The purpose of this Emergency Response Plan is to prepare the Owner(s) and site Workers for potential emergencies that may arise on the SunAlta Solar PV One Project when fully operational.

OWNER RESPONSIBILITIES

It is the responsibility of the Project Owner(s) to ensure the SunAlta Solar PV One Project Emergency Response Plan is current for site conditions and anticipated emergencies, including:

- Providing County of Newell Fire and Bassano Fire Chiefs Incident Action Plan
- Providing gate keys to Newell County and Bassano Fire Chiefs for site access
- Ensuring all workers have appropriate training to deal with potential emergencies
- Providing necessary emergency response equipment and personal protective equipment (PPE)
- Designating workers who will provide rescue services and supervise evacuation procedures in an emergency
- Undertaking emergency response training exercises for project site simulating potential emergencies identified in emergency response plan
- Repeating emergency response exercises at intervals required to ensure that workers responsible for rescue and evacuation are competent to carry out their duties
 - o *Reference Part 7 of Alberta OHS Code – Emergency Preparedness and Response*

HAZARD ASSESSMENT

SunAlta Solar PV One project owner(s) and workers shall follow and apply all aspects outlined in Part 2, Hazard Assessment, Elimination and Control of Alberta's OHS Code.

Once operational, site will be considered high hazard, as per Schedule 2, Table 2(b)(iii) Electrical Generation and Distribution Systems.

There is always an electrical shock hazard when dealing with photovoltaic/solar systems - always treat photovoltaic systems as live.

High risk of fire due to electrical activity.

Solar panels may continue to supply electricity during rescue efforts if not isolated.

Transformers procured MAY contain a form of oil that acts as a coolant. This non-mineral oil, typically silicon or vegetable-based, has a flashpoint of >300°C; however, is considered an ignition hazard. Transformers will be housed in a secondary containment berm to mitigate environmental spills.

Maneuvering through the site may be difficult due to the close proximity of solar arrays. This may pose a hazard for emergency responder access.

POTENTIAL EMERGENCIES

General Procedures

1. Priority is to ensure the safety of yourself and workers in your area
2. Remove yourself from the situation, if possible, and call 9-1-1
3. Muster at Muster Point #1 – north main gate
 - a. Alternate muster – Muster Point #2 south gate
4. Contact utility provider (FORTIS) or contractor to ensure electricity is completely isolated (if required)

Emergency Procedures

1. Electrocutation

- a. Ensure your safety and the safety of workers in your area
- b. Shout for help – get attention of other workers for assistance
- c. Other workers meet at Muster Point #1, who are not assisting
- d. **Isolate electricity** – if possible
 - i. DO NOT attempt to assist anyone when electricity cannot be isolated
 - ii. Remove hazards that impede rescue – if possible
- e. Call 9-1-1
- f. Check for consciousness and breathing of injured worker
- g. Start CPR if no breathing present – use AED if available
- h. Provide first aid if required
- i. Wait with worker until EMS arrives and takes over

2. Fire

Priority with all fires is to seek safety as soon as possible. If a fire is small, worker may use a fire extinguisher to extinguish the fire if they are confident it can be controlled. If it can't, workers are to safely remove themselves from the area and meet at Muster Point #1.

a. Electrical

- i. If severe, exit area as soon as possible
- ii. Isolate electricity – shut down power – if possible
- iii. Call 9-1-1
- iv. Provide first aid to affected workers

b. Equipment/Vehicle

- i. If severe, exit area/vehicle as soon as possible
- ii. Turn off ignition source
- iii. Attempt to extinguish fire with fire extinguisher – if possible
- iv. Call 9-1-1
- v. Isolate electrical sources close to fire – if required

c. Prairie/Vegetation Fire

- i. Call 9-1-1
- ii. Remove yourself and other workers from site
 1. Potential muster at muster point #1 – dependent on conditions
- iii. If fire close to site, contact FORTIS
- iv. Shut site down

3. Explosion

- a. Ensure your safety and safety of workers in your area
- b. Call for help – get the attention of your co-workers
- c. Call 9-1-1
- d. Isolate electricity – if possible
 - i. Potentially shut down site
- e. Provide first aid to affected workers

4. Extreme Weather

Workers will monitor weather conditions and take appropriate action. When required, workers will seek appropriate shelter-in-place for the situation, which may include:

- O&M building
- Canteen
- E-House
- Vehicle

a. Electrical Storms

- i. Follow the 30-30 rule
 1. Start counting after you see a lightning flash. If you hear thunder in less than 30 seconds, lightning is close enough to seek shelter
 2. Wait 30 minutes from last lighting flash to resume work outdoors
- ii. If you cannot seek shelter
 1. Stay low to the ground – ditch or depression
 2. Do not stand beside metal conducting material/equipment
- iii. Call FORTIS for fallen or sagging wires, power outages and downed lines after storm

b. Tornado

- i. Seek shelter-in-place
 1. Mechanical buildings
 - a. Try and stay away from doors
 2. If you're outside and can't reach shelter
 - a. Stay low to the ground – ditch/depression/culvert
 - b. Protect your head
 - c. Watch for flying debris
- ii. Be extremely cautious exiting shelter/area after tornado:
 1. Building structure may be compromised
 2. Debris in area causing hazards
- iii. Shout for help/attract attention of co-workers
- iv. Call 9-1-1
- v. Provide first aid as required
- vi. Call FORTIS for fallen or sagging wires, power outages, and downed lines

c. Blizzards/Winter Storms

- i. Monitor weather conditions – do not travel in adverse weather
- ii. Seek shelter-in-place
- iii. Reach site contact if stranded onsite to advise of your location
- iv. Monitor wind speed as it may turn down power lines and uplift solar panels from mounts
- v. Call FORTIS for fallen or sagging wires, power outages, and downed lines

d. Cold Conditions

- i. Stay in communication with co-workers
- ii. Work in short shifts and take breaks often
- iii. Keep emergency kit in work vehicle and in E-building &/or O&M building with first aid kit

1. Frost Bite

- a. Remove worker from cold environment
- b. Slowly warm frozen skin and tissue – this will be painful
- c. Do not let worker walk on frostbitten feet
- d. Call 9-1-1 if worker loses consciousness

2. Hypothermia

- a. Remove worker from cold environment – if possible
- b. Call 9-1-1 if worker unconscious or semi-conscious
- c. Monitor breathing – start CPR if not breathing
- d. If breathing, slowly warm
- e. Give conscious worker something warm and sweet to drink
 - i. DO NOT give semi-conscious worker anything by mouth
- f. If clothing wet or damp - replace if possible
- g. Keep worker warm and wait for EMS to arrive

5. Downed Power Line/Struck Buried Utility

- a. Do not touch or approach downed power line
- b. Stay 10 meters away
 - i. Assume anything touching a power line is energized
- c. Call FORTIS
- d. Call 9-1-1
- e. If you're in a vehicle, DO NOT GET OUT, stay inside until help arrives, or there is a fire
- f. If vehicle on fire, jump free with both feet/legs together
 - i. NEVER TOUCH THE GROUND AND VEHICLE AT THE SAME TIME
- g. If necessary, isolate and de-energize power sources
- h. If required, full shut down
- i. If worker is in contact with downed line, do not touch them
 - i. Follow procedures for electrocution and energy isolation

6. Flood

This site is located near an irrigation canal, which is controlled by a dam upstream. Should the site become flooded, electrical risks are higher due to water conducting electricity. Should flooding of any kind happen (irrigation canal, 100-year rainstorm, etc.), workers will:

- a. Ensure workers are safe
- b. Call FORTIS
- c. Call 9-1-1 if needed
- d. Isolate energy – potential site shut down

7. Medical emergencies

a. Heart attack

- i. Call 9-1-1
- ii. Put worker at rest/comfortable position
- iii. Loosen restrictive clothing
- iv. Monitor breathing and give aspirin to chew and swallow
- v. Start CPR with AED if no breathing present
- vi. Continue CPR until worker is breathing, EMS arrives and takes over, or you're physically unable to continue CPR

b. Burns

- i. Call 9-1-1
- ii. Remove worker from energy or heat source &/or remove hazards
- iii. Isolate energy if needed
- iv. Ensure worker is breathing
- v. Start CPR if not breathing
- vi. Provide appropriate first aid
- vii. Transport to medical aid if required

c. Slip/trip/fall injuries

- i. Ensure area is safe in order to assist
- ii. Ensure worker is breathing
 1. Start CPR if worker not breathing
- iii. Call 9-1-1 – situation dependent
- iv. Assess level of consciousness
- v. If suspected head/neck/spinal injury:
 1. Tell worker not to move
 2. Immobilize head in the position found to prevent movement
 3. Wait for EMS to arrive
- vi. Provide appropriate first aid for injuries sustained
- vii. Transport to medical assistance if required

8. Aggressive/hostile individuals/groups

- a. Priority is the safety of site workers
- b. Do your best to ignore individuals/groups
- c. Call 9-1-1
- d. Do not engage – this may escalate the situation – move on
- e. Other workers should monitor individual/group to make sure they aren't tampering with equipment or placing explosives, etc.

9. Spills/Accidental Release

- a. Don and use PPE
- b. Isolate the area – spill should be fully contained in berm
- c. Call 9-1-1
- d. Seek SDS for material spilled
- e. May need to report to Alberta Environmental Response – 800-222-6514

SITE ACCESS

The main entrance is in the northwest corner of the project site. Sliding gates with a deadbolt style lock will secure site access at this location. The main gate will remain open while workers are present. If the gate is secured while workers are present and EMS requires access, a worker will be stationed at the main gate to provide access.

If workers are not present, keys that are left with the Newell County and Bassano Fire Departments (to be provided by project owners) will be used to open locks. Should keys not be available, bolt cutters will be used.

Secondary site access is on the south side of project site via a gate. This access gate will be secured, and the lock must be removed either by unlocking with keys or cutting off.

Muster Points

The main muster point for the site will be at the main gate. A secondary muster point is located at the site's south entrance.

Signage will be posted, indicating muster point locations.

Training

All workers on site will have Standard First Aid training, relevant photovoltaic system training and appropriate electrical training. Workers will also receive onsite training for operation and maintenance of equipment and hazards associated with said equipment.

Emergency Equipment

All emergency and first aid equipment will be located and accessible in the E-House as well as company vehicles onsite.

At a minimum, the below items shall be present:

- Number 2 First Aid Kit
- 3 blankets
- AED (Automated External Defibrillator) – recommend due to high hazard level of site and EMS response time
- Fire extinguishers required for electrical fires (Class C &/or A,B,C,D) will be in every substation building exit door as per Rule 8-020(2)

Emergency operation procedures for fire extinguishers are indicated on the extinguishers and follow the P.A.S.S. application. Operational procedures for AED's are verbal prompts from the AED that lead the user step by step through the process. AED training is provided during Emergency and Standard First Aid Training.



Workers will contact EMS on their cell phones by dialing 9-1-1, or other voice-activated commands. The onsite communication system will also be available in the E-House building to contact EMS.

A security system with cameras will be installed onsite and monitored.

WMHIS and SDS information will be kept on site and readily available as needed.

PERSONAL PROTECTIVE EQUIPMENT

The owner(s) will provide, and workers shall use appropriate personal protective equipment when dealing with emergencies. PPE will be stored in the E-House as well as in company vehicles.

DESIGNATED RESCUE AND EVACUATION WORKERS

This site will not have workers present regularly. When workers are present onsite, all will be responsible for the rescue and evacuation of workers. Designated rescue and evacuation workers shall receive appropriate training for identified emergencies and ensure worker competency through practice scenarios.

DESIGNATED FIRST AIDERS

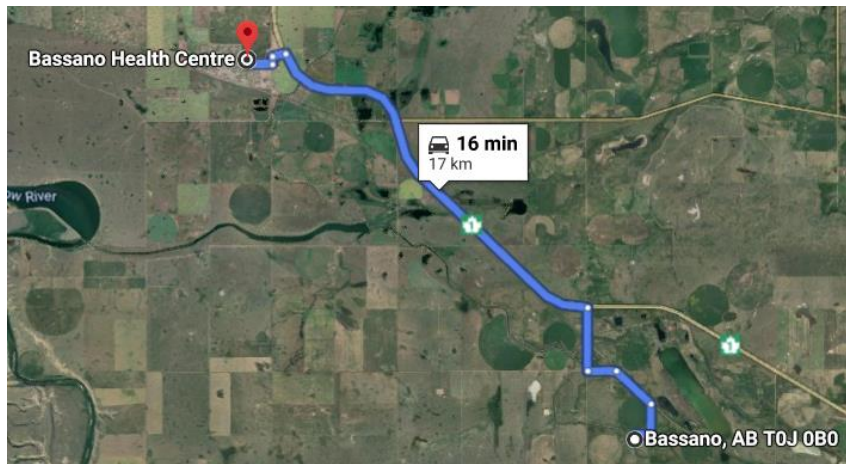
This site will not have workers present regularly and minimal workers will be present when onsite. As such, all workers will have first aid training and be designated first aiders.

EMERGENCY INFORMATION

9-1-1

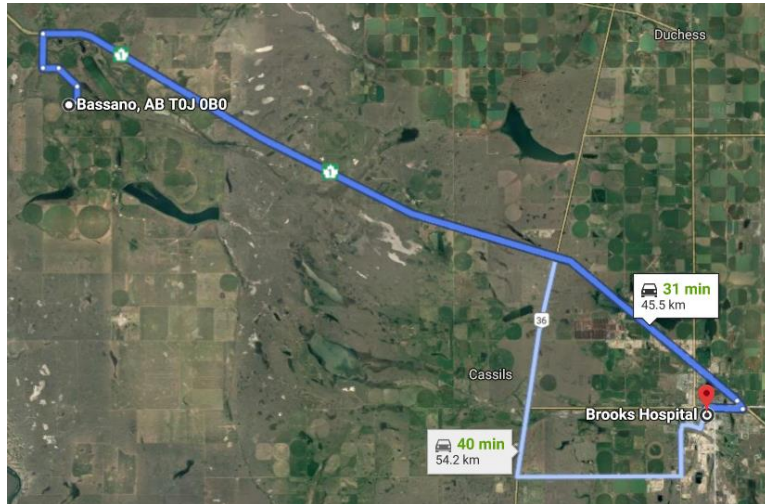
Name	Address	Phone
Hospital/Emergency Room		
Bassano Health Centre	608 5 Ave, Bassano	403-641-6100 <small>* non-emergency</small>
Brooks Health Centre	440 3 Street E, Brooks	403-501-3232 <small>* non-emergency</small>
Fire Hall		
Bassano Fire Dept.	801 5 th Ave, Bassano	403-641-3666 <small>* non-emergency</small>
Rosemary Fire Dept.	203 Railway Ave, Rosemary	9-1-1
Brooks Fire Dept.	504 Cassils Road East, Brooks	403-362-2331 <small>* non-emergency</small>
Gem Fire Dept.	231079 Rgd Rd 164, Newell County	9-1-1
RCMP		
Bassano	639 11 Street, Bassano	403-641-3677
Brooks	310 4 Street W, Brooks	403-362-5535

Bassano Health Centre
Nearest Emergency & Medical Aid

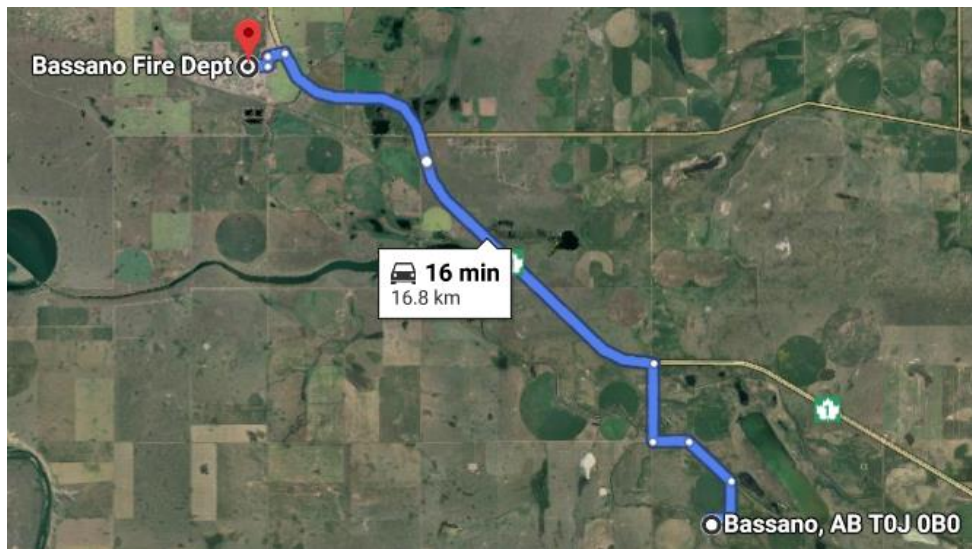


Brooks Health Centre

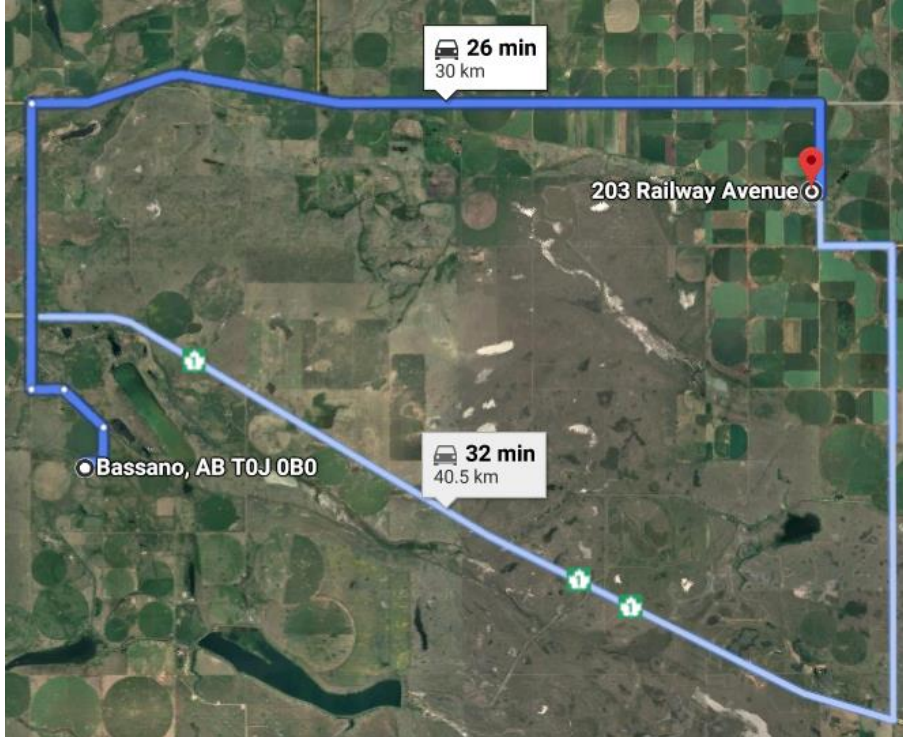
Nearest Emergency & Medical Aid



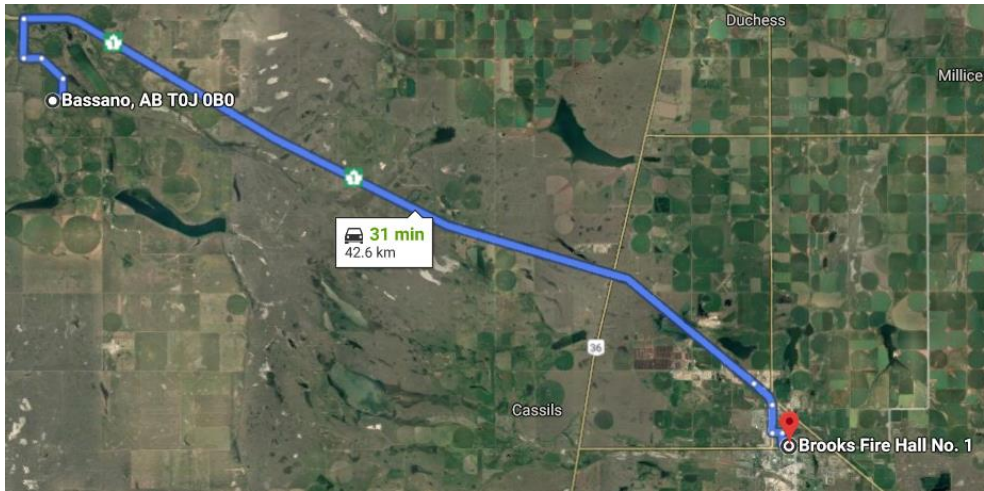
Bassano Fire Department



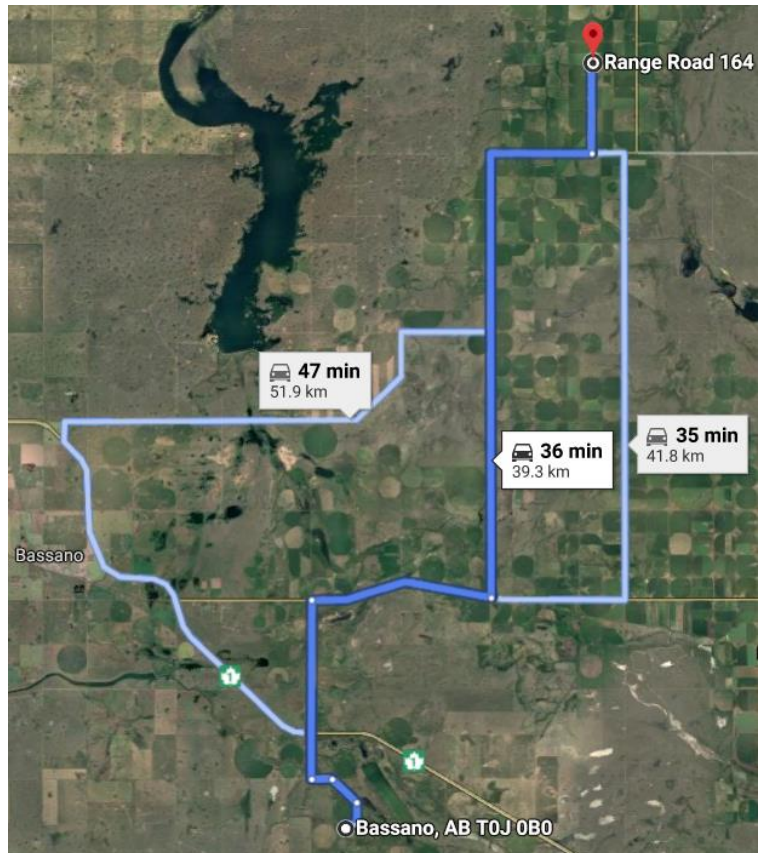
Rosemary Fire Department



Brooks Fire Department



**Gem Fire
Department –
Newell County**



SERVICE INFORMATION

Police/Fire/Ambulance	911
FORTIS	310-9419
ATCO	1-800-511-3447
Town of Bassano	403-362-6266 888-361-7921
Occupational Health & Safety	1-866-415-8690
Alberta Environment & Parks	310-0000
Environment Canada	1-800-668-6767
Workers Compensation Board	1-866-922-9221
Poison Control Centre	1-800-332-1414

*** The information in this site safety plan does not take precedence over applicable government legislation, with which all workers should be familiar.**