



Customer's Information Package for Padmount Transformer Installations

General:

ENWIN Utilities Ltd. (ENWIN) will typically install and maintain one pad mounted transformer on the owner's property up to a maximum 2000 KVA at 347/600V or 1000 KVA at 120/208V if, in its judgment, the size and type of load warrants the supply of such transformation. Larger transformers and non-standard voltages may also be considered upon request. The transformer will be sized to provide for the customer's present normal maximum meter demand load and an allowance for any reasonable load growth anticipated by the customer.

Limitation of Supply:

The primary supply to new pad mounted transformers will be 27.6 kV. The customer will be required to contribute towards the extension of 27.6 kV if it is distant from the transformer location.

Location:

The padmounted transformer shall preferably not be located within 6.1 m (20 feet) of openings, doors and windows. Since ENWIN uses transformers with an internal current limiting fuse and a pressure relief device, the minimum clearance required by code can be reduced to 3 meter (10 feet) subjected to ENWIN's approval on a case by case basis. The minimum clearance to be a 3 meter (10 feet) access to the transformer opening, and a 1 meter (39 inches) clearance on all other sides.

In order to maintain the above noted clearances from buildings constructed on neighbouring properties, transformers must also be located no closer than 3 meter (10 feet) from all property lines.

At ENWIN's discretion the customer must provide and install Protective Bollards around the transformer.

Access for Maintenance:

The customer must provide a servicing access area around any pad mounted device, including mini-padmount and padmount transformers, switching units and vaults. Each side of the concrete pad should have a minimum of 1m (39") clearance, except any side with an access door, which shall have a minimum of 3m (118") clearance.

A clear path must be available leading to the area. No landscaping, bushes, etc should encroach on this area. ENWIN Utilities Ltd. will not be responsible for any damage or removal of landscaping, bushes, etc within the access area. As well, the concrete pad must be within 50 mm (2") to 150mm (6") above the surrounding ground. The grade of this surrounding area should not be sloped in such a manner that run-off collects around the pad.

Service Pole:

In most cases the underground 27.6 kV supply to the pad mounted transformer will originate from an ENWIN 27.6 kV pole. At ENWIN's discretion, an existing, clear, acceptable pole may be used or ENWIN may install a new pole. The customer may be required to contribute towards the cost of the pole.

Easements:

The Owner shall provide an easement of 3m X 3m for a lateral pole, 1.5m for ducts and cables and 6m X 6m for transformer concrete foundation, pad and switchgear.



Spare Primary Conductors – Transformer Beyond 150’:

ENWIN does not have facilities to provide emergency power beyond 150’. Where the transformer is positioned 150’ or more from the lateral pole, ENWIN recommends the installation of spare primary conductors.

Installation of spare primary conductors is an ENWIN standard practice allowing power restoration within approximately four hours in the event of a cable failure.

Power restoration without spare primary cables would be in excess of forty-eight hours. The customer would be responsible for any claims or damages resulting from any delay in power restoration. ENWIN will not be liable for these claims.

Labour and Materials Provided by ENWIN Utilities Ltd.:

ENWIN will provide and install Transformer, Primary Cables and Step Potential Grounding. ENWIN will provide Duct and Duct Sweeps for installation by the customer. ENWIN will provide Engineering and an Installation Drawing for the customer.

Labour and Materials Provided by the Customer:

The customer must provide excavation and backfilling, sand, concrete, transformer pad and foundations, installation of ducts, concrete encasement of ducts and reinstatement of sod from transformer site to lateral pole, protective bollards around the transformer, if required, and concrete pylon encasing duct at the lateral pole.

Provisions for ENWIN Metering to be Provided by the Customer:

The customer must provide metering cabinet(s) and/or switchgear as specified by ENWIN. The customer must deliver and pick-up metering cabinet back plate(s) as specified by ENWIN. The customer must pick-up and install ENWIN metering transformers within switchgear as specified by ENWIN.

The ENWIN metering equipment is to be located along with the customer’s main disconnect switch within a walk-in, weather proofed, locked, illuminated electrical room. Ladder access is not acceptable.

For multiple meter installations, the customer must label all meter locations with the correct corresponding addresses and unit numbers. The customer must also post a floor plan drawing in the electrical room showing the unit number and address system for the building.

For outdoor meter cabinets, a 200 watt heater bar (supplied from a 120V circuit) and a thermostat are required inside the meter cabinet to prevent condensation build up.

ENWIN is to be allowed unrestricted access to its metering equipment during normal working hours. ENWIN may request a key to the electrical room if necessary to obtain such access.

Where pulse metering is required, the customer must provide a voice grade telephone line terminating with an RJ-11 receptacle inside the metering cabinet.

Where network meters are required, the customer must give ENWIN a deposit before the meters will be ordered.

Delivery of metering equipment ordered by ENWIN will usually take eight (8) weeks from the date of signature of the Offer to Connect agreement.



Application for Pad Mounted Transformer Installation:

The customer must complete and return the attached Application for Pad Mounted Transformer Installation along with the required data, information and drawing before ENWIN will proceed with the project and issue the Agreement to Connect.

Agreement to Connect:

The customer must enter into a Connection Agreement with ENWIN. The Agreement will include the Offer to Connect and will detail the customer contribution, if required. The contribution must be paid and the Agreement must be signed by the owner before ENWIN will connect.

Customer Contribution:

ENWIN will perform an economic study comparing the expected monthly revenue to the expected servicing and metering costs. If the expected revenue does not cover the servicing and metering costs, the customer must contribute the difference.

Alternate Bids:

Where a Customer Contribution is required, the customer has the right to obtain Alternate Bids for design & construction by an ENWIN approved contractor, according to ENWIN specifications. The customer must pay ENWIN to inspect the contractor's work.

The customer will not be allowed to extend or perform work on energized ENWIN plant.

Time Line:

A typical pad mounted transformer installation time line is shown below. **Each Customer step of the time line must be completed before ENWIN can proceed with its next step.**

1. CUSTOMER REQUESTS A PAD MOUNTED TRANSFORMER

Customer requests and receives the Application Form and Customer Information Package from ENWIN – **on request.**

Customer's contractor requests and receives Contractor's Information Package from ENWIN – **on request.**

2. CUSTOMER COMPLETES AND RETURNS THE APPLICATION FORM

ENWIN waits for the **Customer** to return the completed Application Form along with all required information.

3. ENWIN PRODUCES THE PRELIMINARY DESIGN AND ESTIMATE

ENWIN completes Preliminary Design and Estimate – **this takes approximately one week.**

4. ENWIN PREPARES THE OFFER TO CONNECT

ENWIN prepares the Offer to Connect and sends it to the customer – **this takes approximately two weeks.**

5. CUSTOMER SIGNS AND RETURNS THE OFFER TO CONNECT WITH CHEQUE OR P.O. AS REQUIRED

ENWIN waits for the **Customer** to sign and return the Offer to Connect along with the Customer Contribution to ENWIN.



6. ENWIN PRODUCES THE FINAL DESIGN AND DRAWING

ENWIN sends the final electrical service drawing to the customer's contractor – **this takes approximately one week.**

7. ENWIN COORDINATES WORK WITH THE CUSTOMER'S CONTRACTOR

ENWIN commences work in coordination with the customer's contractor. This work includes scheduled locates, inspection of ducts and trenches, approval of Compaction Tests, installation of cable, installation of ground rods, installation of transformer– **this takes up to 35 weeks.**

8. CUSTOMER OBTAINS ESA INSPECTION

ENWIN waits for the customer to arrange for and obtain ESA inspection and approval before ENWIN will connect and install the meters.

9. ENWIN CONNECTS THE SERVICE AND ENERGIZES THE TRANSFORMER

ENWIN connects and energizes the transformer and installs the meters – **this takes up to 5 days after the connection order has been received from ESA.**

10. ENWIN CREATES RECORDS AND FINALIZES THE PROJECT

ENWIN Creates Records, closes work orders, produces the final invoice where applicable and finalizes the project.

Attached: Typical Pad Mounted Transformer Installation Drawing - not for construction.
 Application for Pad Mounted Transformer Installation – for completion & return



About *ENWIN* Utilities Ltd.

ENWIN Utilities Ltd. is a managed services company providing billing, credit, financial & customer service; and Help Desk support on behalf of *ENWIN* Utilities Ltd., Windsor Utilities Commission, MaXess Networkx, and The City of Windsor.