Informational Checklist, Do You Have Enough Power ?

Calculations and Additional Loads For,
Service, Subpanel, Generator, EV Charger, Pool Heaters, Hot tubs.

Power companies require you to inform them of additional loads to your service, to prevent overloading of transformers. (Notify your power company)

RESIDENTIAL ELECTRICAL LOAD WORKSHEET
(Main Services 220.82 & Subpanels 215.2)

Project Address_____ Township,_____

(CALCULATION TO INCLUDE, HOUSE, GARAGE, OUT BUILDING.)

NEC 220.82 "Optional Feeder and Service Load Calculation.
(A)

General light, power _____SF x 3 volt-amperes		= _____
Appliance Cir ,	2 x 1500 volt-amperes	= _____
Laundry Cir,	1 x 1500 volt-amperes	= _____
Electric Cooktop,	NP Rating,	= _____
Electric Range,	NP Rating,	= _____
Electric Wall Oven,	NP Rating,	= _____
Electric Water Heater,	4500 VA / NP Rating,	= _____
Dishwasher,	1200 VA	= _____
Dryer,	5000 VA	= _____
Refrig,	1200 VA each	= _____
Freezer,	800 VA each	= _____
Micro wave	1500 VA / NP rating	= _____
Furnace,	NP rating, each	=_____
Hot Tub,	NP rating	=_____
Other	NP rating, each	= _____

Sub Total A (Add all loads listed Above.) = _____
The first 10,000 VA is calculated at 100% = 10.000
Remaining Volt-amperes calculated at 40% + _____

Sub Total A = _____

(B) Heating / Air Conditioning

Air Conditioning , All unit, (100% np rating) = _____

Electrical space heating up to 3 separate units (65% np rating) = _____
Electrical space heating 4 plus separate units (40% np rating) = _____
Electrical Thermal Storage System. (100% np rating) = _____

Heat Pump/s without supplemental heating, (100% np rating)
Heat Pump/s with supplemental heating, (100% np rating) =_____
(Plus 65% of the supplement heating load) =_____

Largest load AC or Heat, **Sub Total B** =_____

220.83(B) Existing Dwelling units, (New loads to existing service to be added below)
625.41 EV, Continuous Duty Loads

(C) New Loads

EV Charger, 11500 watt 60 amp 240 volt (100% np rating) =_____
EV Charger, 9600 watt 50 amp 240 volt (100% np rating) = _____
EV Charger 1840 watt 20 amp 120 volt unit (100% np rating) = _____
EV Charger Larger sizes, (100% np) = _____
EV Charger, 2 (100% np rating) = _____
Swimming Pool Pump, (s) Total loads. =_____
Electric Pool Heater, =_____
Sub Total C =_____

Total A _____ + B _____ + C _____ = **D** _____ **Total KW load**

KW,_____divided by 240 Volts =_____Amps

Service size.	100 ( )	150 ( )	200 ( )	320 ( )
Service 80% Rating	80 amp	120 amp	160 amp	256 amp

Is Service size code compliance? Yes ( ) No ( )
Is there a generator on the premises? Yes ( ) No ( )
Will a load shedding device be required? Yes ( ) No ( )

Was the power company notified of Add load ! Yes ( ) No ( )

E Sub Panel Load Calculation for Garages with Additional Loads.

Is there a sub panel involved? Yes ( ) No ( )
Sub Panel Feeder Calculations Required. (NEC 215.2 -A-1) Yes ( ) No ( )

Detached Garages.
A
Estimated lighting load. =_____
Garage door opener /openers, =_____
Furnace, (np rating =_____
Larger Tools, compressors, / Welder (np rating) =_____
1, _____ =_____
2, _____ =_____

A Non continuous loads, Total Kw. =_____

B
Electric Heat, (np rating)
EV Charger, 11500 watt 60 amp 240 volt (100% np rating) =_____
EV Charger, 9600 watt 50 amp 240 volt (100% np rating) = _____
EV Charger 1840 watt 20 amp 120 volt (100% np rating) = _____
EV Charger Larger sizes, (100% np) = _____
EV Charger, 2 (100% np rating) =_____

B Continuous Loads Kw,_____ x 125% = Total Kw =_____

Total A _____ + B _____ = C _____ Total KW load

KW,_____divided by 240 Volts =_____Amps

Will load shedding be needed? Yes ( ) No ( )
Size of sub panel, _____Amp
Size of feeder conductors, #_____ ( ) copper ( ) aluminum.
Conductor amperage rating, _____ (60c)

Is the Subpanel code compliance, Yes ( ) No ( )