

```
# This module cross checks the three permit spreadsheets
# and builds a list of entries that appear on all three sheets
```

```
def crossCheck(H, E, B):
```

```
    pL=[]
```

```
    elec=BuildElectric(E)
```

```
    build=BuildBuild(B)
```

```
    for row in H:
```

```
        d={ }
```

```
        addKeyValues(d, row)
```

```
        d['check']=0
```

```
        for entry in elec:
```

```
            if entry['Parcel Number']==d['Parcel Number']:
```

```
                d['Capacity (kW)']=entry['Capacity (kW)']
```

```
                d['Installation Date']=entry['Installation Date']
```

```
                d['Year of Installation']=entry['Year of Installation']
```

```
                d['check']=d['check']+1
```

```
                break
```

```
        for item in build:
```

```
            if item['Parcel Number']==d['Parcel Number']:
```

```
                d['Total Cost'] = item['Total Cost']
```

```
                d['check']=d['check']+1
```

```
                break
```

```
        if d['check']==2:
```

```
            d['SOLAR Rebate']='N/A'
```

```
            cW = costPerWatt(d)
```

```
            d['Cost per Watt'] = cW
```

```
        del d['check']
        pL.append(d)
    return pL
```

```
def BuildElectric(E):
```

```
    elec=[]
    for row in E:
        e={}
        e['Parcel Number']=row['Parcel Number']
        e['Capacity (kW)'] = row['Solar System Power Capacity / System Output (kW)']
        e['Installation Date'] = row['Permit Last Inspection Date']
        y = installYear(row)
        e['Year of Installation'] = y
        elec.append(e)
    return elec
```

```
def BuildBuild(B):
```

```
    build=[]
    for row in B:
        b={}
        b['Parcel Number']=row['Parcel Number']
        b['Total Cost'] = row['Estimated Construction Cost']
        build.append(b)
    return build
```

```
def addKeyValues(d, row):
```

```
    d['Parcel Number'] = row['Parcel Number']
```

```
d['Address'] = row['Address']
d['Plan Number'] = row['Plan Number']
d['Contact Type'] = row['Contact Type']
d['Contact Company Name'] = row['Contact Company Name']
d['Contact First Name'] = row['Contact First Name']
d['Contact Last Name'] = row['Contact Last Name']
d['Contact Email'] = row['Contact Email']
pN = phoneNum(row)
d['Phone Number']=pN
iT = installType(row)
d['Installation Type']=iT
return d
```

```
def phoneNum(row):
```

```
    if row['Contact Business Phone']!="":
        pN = row['Contact Business Phone']
    elif row['Contact Mobile Phone']!="":
        pN = row['Contact Mobile Phone']
    else:
        pN = row['Contact Home Phone']
    return pN
```

```
def installType(row):
```

```
    words = []
    i = "
    p = row['Plan Description']
    p = p.replace('t', '')
```

```

p = p.replace('T', ' ')
p = p.replace('*', ' ')
p = p.replace(';',' ')
p = p.replace(':', ' ')
p = p.replace('/', ' ')
t = p.split()
for entry in t:
    t=entry.lower()
    if t!="":
        words.append(t)
for w in words:
    if w == 'roof':
        i = 'roof'
    elif w == 'ground':
        i ='ground'
if i =='roof':
    iT = 'Roof'
elif i == 'ground':
    iT = 'Ground'
else:
    iT = row['Plan Description']
return iT

```

```

def costPerWatt(d):
    cap=float(d['Capacity (kW)'])
    if cap == 0: return "";

    cos=float(d['Total Cost'])

```

```
cPW = cos/(cap*1000)
```

```
return cPW
```

```
def installYear(entry):
```

```
    D = entry['Permit Last Inspection Date']
```

```
    D = D.replace('/', '')
```

```
    ND = D.split()
```

```
    for item in ND:
```

```
        test=int(item)
```

```
        if test > 100:
```

```
            year=test
```

```
    return year
```