

Eversource non-EDI IDR Requests

Utilities

1. WMECO/CLP
2. NSTAR (BECO/COMELEC/CMBRDG)
3. PSNH

Goal

To automate the process of receiving IDR data for Eversource utilities. This will involve:

- Scraping PR-specific username and login info from utility emails
- Creating a GAHR file to send to ESG containing the login info and LDC account numbers
- Sending GAHR file to an FTP
- Receiving and parsing USHI files for each LDC account

Current Process

1. MML is validated, LOA files are processed and sent out to utility through email
2. GAHR requests are sent out for EDI data, USGH is parsed upon return (2-4 days)
3. IDR data is uploaded to a utility portal. Login credentials, LDC account information and available timeframe is then emailed from the utility to Engie (3-7 days). Example below.

Hello Margaret,

ENGIE Resources Inc has requested access to your load data, for which you signed authorization. The data is provided via EPO Online, and you are welcome to use the service. The subscription automatically renews each year.

ENGIE Resources Inc,

The Merritt 7 Venture EPO Online account is now operational and ready for immediate use. The start of the annual subscription service is today, **10/17/2019** and will automatically renew each year. Below is the user id and password to begin accessing the data immediately.

| Customer | BA Account Number | SA Number | User ID |
|-------------------|-------------------|-----------|-------------|
| Merritt 7 Venture | 51-639643022 | 804432003 | merit-engie |
| | 51-676143035 | 702132006 | |
| | 51-071643076 | 501332007 | |
| | 51-632943031 | 972432002 | |
| | 51-013453048 | 706832009 | |
| | 51-773053046 | 469532007 | |
| | 51-768353054 | 427832005 | |
| PASSWORD | | | |
| 7877h | | | |

4. Analysts manually log in to the portal (<http://eversource.epo.schneider-electric.com/eversource>) and download account data. Example below.

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EVERSOURCE | Energy Profiler Online

Leading the way in energy efficiency

Energy Profiler Online provides you the information to better manage energy efficiency, costs, demand, and sustainability of your facilities providing accurate, detailed energy data to identify cost savings opportunities, support government efficiency mandates, and improve reliability.

User ID: Password:

[Log In](#) [Forgot your password?](#)

Eversource offers our customers and energy suppliers access to customer authorized interval meter data via the Energy Profiler Online (EPO) service hosted by Schneider Electric. The EPO service provides user friendly data selection and analysis tools to organize, graph, and report interval data to help assess load and usage profiles. This service is not intended for billing comparison purposes.

If you would like assistance regarding EPO Services, please email EPOAdmin@eversource.com or call the Toll Free number 866-658-2356.

EVERSOURCE | Energy Profiler Online Engie Resources ▾

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Reports

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Date Range

☒ Custom Date Range

☒ Last 400 Days Available
☐ Month to date
☐ Year to date
☐ Yesterday
☐ Last Month

| Accounts | | Meters | Groups | |
|--------------------------|-----------|-----------------------------|------------|------------|
| <input type="checkbox"/> | Account | Description | Data Start | Data End |
| <input type="checkbox"/> | 768353054 | MERRITT 7 601 FLOORS | 03/26/2012 | 10/17/2019 |
| <input type="checkbox"/> | 013453048 | MERRITT 7 601 MECH | 08/04/2016 | 10/17/2019 |
| <input type="checkbox"/> | 071643076 | MERRITT 7 VENTURE LLC | 02/12/2005 | 10/17/2019 |
| <input type="checkbox"/> | 676143035 | MERRITT 7 VENTURE LLC | 06/30/2015 | 10/17/2019 |
| <input type="checkbox"/> | 632943031 | MERRITT 7 VENTURE LLC | 08/30/2004 | 10/11/2019 |
| <input type="checkbox"/> | 639643022 | MERRITT 7 VENTURE LLC (301) | 05/19/2015 | 10/17/2019 |
| <input type="checkbox"/> | 773053046 | MERRITT SEVEN ZZ% | 01/01/2003 | 10/15/2019 |

Selected Date Range: —

- Analysts manually filter, adjust & drop the data (for each account) into /DATARESPONSE.
- General volume is 2-5 emails per day with 1-10 accounts per email.

Proposed Process Enhancements

1. Create GAHR file, send to ESG

Engie would create a GAHR file populated with portal logins, passwords and LDC accounts, for each utility. This would be sent via FTP to ESG, where they would return USHI files to be parsed by Engie.

Example GAHR file:

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SERNA_CLP_GAHR_20190924_125912_MVN_#T3813798 - Notepad

| | | | | | | | | | |
|------|--------------------|----------|-------------|-------------------------|----------|-----------|-------|-----------|-------------------------|
| 1000 | C20190924125913 | 20190924 | 125913 | 099668332 | SERNA | 049050839 | ESG | 01.57 | |
| 2000 | 201909248031008112 | GAHR | E | 1 | 141429 | 099668332 | SERNA | 006917090 | CONNECTICUT LIGHT POWER |
| | | | | CT | | | | | |
| 3000 | 201909248031008112 | 8S | 006917090 | CONNECTICUT LIGHT POWER | | | | | |
| 3000 | 201909248031008112 | SJ | 099668332 | SERNA | | | | | |
| 5000 | 201909248031008112 | | 51614803021 | | 20190901 | | | 20180901 | |
| | | | | | | | | | |
| | cove-engie | 88cka | Y | Y | | | | | |
| 2000 | 201909248031008113 | GAHR | E | 1 | 141429 | 099668332 | SERNA | 006917090 | CONNECTICUT LIGHT POWER |
| | | | | CT | | | | | |
| 3000 | 201909248031008113 | 8S | 006917090 | CONNECTICUT LIGHT POWER | | | | | |
| 3000 | 201909248031008113 | SJ | 099668332 | SERNA | | | | | |
| 5000 | 201909248031008113 | | 51408452035 | | 20190901 | | | 20180901 | |
| | | | | | | | | | |
| | cove-engie | 88cka | Y | Y | | | | | |
| 2000 | 201909248031008114 | GAHR | E | 1 | 141429 | 099668332 | SERNA | 006917090 | CONNECTICUT LIGHT POWER |

2. Individually request through ESG portal

ESG currently has a portal that supports Eversource non-EDI data requests and returns USHI files. This involves using the account number (one at a time), login username and password. This could potentially be automated or used for “one-off” requests (i.e. when the utility replies to an LOA request saying Engie already has login credentials).

Example:


Market Portal for ESG's Transaction Management Services

Sender Name * SERNA
Receiver DUNS * AUTO
Receiver Name * AUTO
Action ID * GAHR
Commodity * Electric Service
Transaction Qualifier * 1

Organization
LDC Name/DUNS
Mandatory
Organization Name *
ESP Name/DUNS
Mandatory
Organization Name *

Account
Mandatory
LDC Account Number *
Service End Date * [Calendar](#)
Service Start Date * [Calendar](#)
Customer Authorization * Yes No = Letter of authorization has not been provided to utility Yes = Letter of authorization has been provided to utility
Currently Enrolled * Yes Yes = if account is currently enrolled with supplier No = if requesting pre-enrollment usage
Username [Username is required when LDC is CL&P](#)
Password [Password is required when LDC is CL&P](#)

Submit Request Reset

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3. In-house webscrape

Upon receiving login credentials and account numbers, Engie could scrape the portal directly, filter the data and drop into /DATARESPONSE. This is currently a workaround implemented in Python but could potentially be done in a more efficient way by IT.

Key requirements with the portal is that the last 400 days is used, resulting in four or less accounts being able to be downloaded at once. Downloaded files are then parsed into Raw IDR, which is filtered into IDR data and dropped into /DATARESPONSE.

This process exists on a server, but requires a local scrape of email logins into an Excel file. Filtered data then exists on the server but must be manually downloaded one-by-one and OBSSed or dropped into /DATARESPONSE.

| | A | B | C | D | E | F |
|----|---|---------------------|----------------------|----------|---------------|------|
| 1 | accts | date | name | pw | user | util |
| 2 | ['800250901'] | 2019-10-16 09:19:04 | FREED'S BAKERY, LLC | 64nd55 | nhengi-bake1n | PSNH |
| 3 | ['800169106'] | 2019-10-16 09:17:38 | CENTORR/VACUUM | b5m3x4 | nhengi-cent6n | PSNH |
| 4 | ['800111801'] | 2019-10-16 09:17:15 | KEENE (CITY OF) | a5m2z4 | nhengi-keen1n | PSNH |
| 5 | ['800523903'] | 2019-10-16 09:13:56 | 75 NEW HAMPSHIRE | 75mb43 | nhengi-75ne2n | PSNH |
| 6 | ['800030304'] | 2019-10-16 09:13:30 | WORTHEN INDUSTRI | 65mc53 | nhengi-wort3n | PSNH |
| 7 | ['800044402', '800513801'] | 2019-10-15 09:19:16 | KEARSARGE SCHOOL | 45me73 | nhengi-sarg1n | PSNH |
| 8 | ['800433701'] | 2019-10-15 09:18:33 | HUTCHINSON SEALIN | 25mh93 | nhengi-hutc3n | PSNH |
| 9 | ['800087504'] | 2019-10-15 09:13:02 | NATIONAL GRANGE | 1w5m5w3 | nhengi-nati8n | PSNH |
| 10 | ['800451201'] | 2019-10-08 07:32:37 | SEGWAY INC | d5m6d2 | nhengi-incw1n | PSNH |
| 11 | ['800035302'] | 2019-10-04 13:03:59 | ANTHONY GALLUZZO | x5k7b4 | nhengi-anth3n | PSNH |
| 12 | ['800558001'] | 2019-10-04 13:03:28 | ACADEMY FOR SCIEN | w5k6c5 | nhengi-fors8n | PSNH |
| 13 | ['800094301'] | 2019-10-03 14:20:26 | FOX RUN MALL ASSC | n5k3f8 | nhengi-foxr9n | PSNH |
| 14 | ['800067305', '800067307', '800067309'] | 2019-10-02 11:27:33 | HANNAFORD BROS | c f5k7n4 | nhengi-hann6n | PSNH |
| 15 | ['800560501'] | 2019-10-02 11:26:39 | SAFRAN AEROSPACE | e5k6s5 | nhengi-safr6n | PSNH |
| 16 | ['800508501'] | 2019-09-27 14:05:13 | LITTLE BAY LOBSTER | 45ke7s | nhengi-bay15n | PSNH |
| 17 | ['800522301'] | 2019-09-27 14:03:11 | SPECTRUM MONTHL | 86km3h | nhengi-spec2n | PSNH |
| 18 | ['800470202'] | 2019-09-26 13:40:22 | POLARIS DIRECT LLC | x6h4x7 | nhengi-pola7n | PSNH |
| 19 | ['800113101'] | 2019-09-25 12:07:39 | FIREYE INC | u6h6u5 | nhengi-fire1n | PSNH |
| 20 | ['800516201', '800516202'] | 2019-09-25 12:07:18 | PEPPER DINING INC | s6h7s4 | nhengi-pepp1n | PSNH |
| 21 | ['800489101'] | 2019-09-25 12:05:06 | TAPS | k6h2k9 | nhengi-taps8n | PSNH |
| 22 | ['800592801'] | 2019-09-19 12:20:47 | 70 KELLER STREET LLC | d6h6d5 | nhengi-kell8n | PSNH |
| 23 | ['800408201', '800478003'] | 2019-09-18 13:33:52 | BURBAK MACHINE C | 86hz8z | nhengi-burb0n | PSNH |
| 24 | ['800089701'] | 2019-09-13 13:49:21 | HIGH LINER FOODS | (176hf7f | nhengi-high8n | PSNH |
| 25 | ['800467801'] | 2019-09-13 13:46:50 | COED SPORTS WEAR | c6h6w6 | nhengi-coed6n | PSNH |
| 26 | ['800492101'] | 2019-09-12 12:18:15 | FALL MACHINE COMI | m6f8h8 | nhengi-fall9n | PSNH |
| 27 | ['800591401'] | 2019-09-12 12:17:53 | CARBON FELT INC. | n6f7f7 | nhengi-carb9n | PSNH |

Read Excel file

```
In [2]: loginpath = os.path.join(basepath, 'Logins')
os.chdir(loginpath)

output_df = EPOwebscrape.read_logins('email_logins.xlsx')
output_df
```

```
Out[2]:
```

| | accts | date | name | user | pw | util |
|------|--------------------------------------|---------------------|---|---------------|--------|-------|
| 0 | [800250901] | 2019-10-16 09:19:04 | FREED'S BAKERY, LLC | nhengi-bake1n | 64nd55 | PSNH |
| 1 | [800169106] | 2019-10-16 09:17:38 | CENTORR/VACUUM IND INC | nhengi-cent6n | b5m3x4 | PSNH |
| 2 | [800111801] | 2019-10-16 09:17:15 | KEENE (CITY OF) | nhengi-keen1n | a5m2z4 | PSNH |
| 3 | [800523903] | 2019-10-16 09:13:56 | 75 NEW HAMPSHIRE LL | nhengi-75ne2n | 75mb43 | PSNH |
| 4 | [800030304] | 2019-10-16 09:13:30 | WORTHEN INDUSTRIES INC | nhengi-wort3n | 65mc53 | PSNH |
| ... | ... | ... | ... | ... | ... | ... |
| 1626 | [8948497003] | 2019-04-15 12:58:10 | [BLOUNT FINE FOODS CO'] | SUEZ_HIST | 3824 | NGRID |
| 1627 | [3993388009] | 2019-04-16 15:50:00 | [WILLIAMS COLLEGE] | SUEZ_HIST | 3824 | NGRID |
| 1628 | [1631455010] | 2019-04-16 16:32:57 | [RUGBY ARCHITECTURAL] | SUEZ_HIST | 3824 | NGRID |
| 1629 | [6391959010] | 2019-04-16 16:48:26 | [324 CLARK ST LLC] | SUEZ_HIST | 3824 | NGRID |
| 1630 | [3886255002, 6468460000, 7714572001] | 2019-04-17 15:22:01 | ['PARKIS PLACE', 'CHARLES GATE NORTH', 'CHARLES...] | SUEZ_HIST | 3824 | NGRID |

1631 rows x 6 columns

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Download files from EPO portal

In [4]: output_df_rec

Out[4]:

| | accts | date | name | user | pw | util |
|----|---|---------------------|------------------------------|--------------|--------|-------|
| 0 | [51139828032_572781001, 51480628064_092192009] | 2019-10-17 15:36:18 | Stamford Washington Office | sbc-engie | pag42 | CLP |
| 1 | [51639643022_804432003, 51676143035_702132006, ...] | 2019-10-17 15:18:23 | Merritt 7 Venture | merit-engie | 7877h | CLP |
| 2 | [51013453048_706832009, 51773053046_469532007, ...] | 2019-10-17 15:18:23 | Merritt 7 Venture | merit-engie | 7877h | CLP |
| 3 | [51670597012_759661001, 51441697000_804951001, ...] | 2019-10-17 13:06:17 | Griffin Park Realty | grpark-engie | 892ck | CLP |
| 4 | [51414072009_412481000] | 2019-10-17 13:02:55 | 400 Atlantic Title LLC | 400a-engie | 3336t | CLP |
| 5 | [51824665004_958832004] | 2019-10-17 09:56:30 | SKF | skf-engie | a72cc | CLP |
| 6 | [29228980016] | 2019-10-17 09:50:56 | REBEL RESTAURANTS LLC | regal-engie | tts383 | NSTAR |
| 7 | [29623540027] | 2019-10-17 09:41:42 | TMI OF WESTWOOD | tmi-engie | 8827dt | NSTAR |
| 8 | [26242141013] | 2019-10-17 09:39:35 | LQ MANAGEMENT LLC | lq-engie | 2324at | NSTAR |
| 9 | [54207668054_796921003] | 2019-10-16 13:32:31 | South Campus BH Holdings LLC | klond-engie | g3862 | WMECO |
| 10 | [51040332041_613261002, 51036842094_893271005, ...] | 2019-10-15 14:34:25 | Illinois Tool Works Inc. | itool-engie | xt386 | CLP |
| 11 | [51884534009_126882000, 51003193018_182162009] | 2019-10-15 14:34:25 | Illinois Tool Works Inc. | itool-engie | xt386 | CLP |
| 12 | [26389111001] | 2019-10-15 09:12:48 | AEA TECH | aea-engie | rtg291 | NSTAR |

In [*]: results = []

output_df_rec['success'] = results

user: sbc-engie
password: pag42
set to last 400 days.
logging on...
looking for 2 accts.
found items in portal.
trying search & download...

submitting...
downloaded EPO data file eversource_3a5595eb-e897-4c05-81e8-927becb56804_ddeec44f_hourlycsv.csv.
done with 1 of 13.

user: merit-engie
password: 7877h
set to last 400 days.
logging on...
looking for 4 accts.
found items in portal.
trying search & download...

submitting...
error, accts ['51639643022_804432003', '51676143035_702132006', '51071643076_501332007', '51632943031_972432002'].
done with 2 of 13.

user: merit-engie
password: 7877h
set to last 400 days.
logging on...
looking for 3 accts.
found items in portal.

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Batch process downloaded EPO files into Raw IDRs

```
In [13]: readpath = os.path.join(basepath, 'Downloads')
writepath = os.path.join(basepath, 'Raw_IDR')
error_log = []

for i, file in enumerate(output_df_rec.files[:3]):
    try:
        os.chdir(readpath)
        filedf = pd.read_csv(file, sep = ",", header = 0)
        #accts = ast.literal_eval(output_df.accts[i])
        IDRdrop.raw_split(filedf, readpath, writepath, output_df_rec.util[i], output_df_rec.accts[i])
        print('success, file: ', file)

    except:
        print('error, file: ', file)

print('RAW split complete.')
```

found 4 accounts.
CLP_51441697000_804951001_IDR_RAW.csv written.
CLP_51670597012_759661001_IDR_RAW.csv written.
CLP_51811108075_733761006_IDR_RAW.csv written.
CLP_51923897094_005661008_IDR_RAW.csv written.
success, file: eversource_55a161b0-74f8-42a6-ada9-3813478ad56f_ac7efb37_hourlycsv.csv
found 1 accounts.
CLP_51414072009_412481000_IDR_RAW.csv written.
success, file: eversource_e4c735a9-c66a-4687-a00a-a57797d356ce_b30b40ee_hourlycsv.csv
error, file: None
RAW split complete.

Batch filter Raw IDR into IDR files to be dropped

```
In [17]: readpath = os.path.join(basepath, 'Raw_IDR')
writepath = os.path.join(basepath, 'IDR')
error_log = []

for dropfile in processfiles:
    try:
        IDRdrop.data_drop(dropfile, readpath, writepath)
        print('success, file: ', dropfile)

    except:
        error_log.append(dropfile)
        print("error, file: ", dropfile)
```

success, file: CLP_51414072009_412481000_IDR_RAW.csv
success, file: CLP_51923897094_005661008_IDR_RAW.csv
overlap removed at 9/3/2019, for file:
success, file: CLP_51441697000_804951001_IDR_RAW.csv
success, file: CLP_51811108075_733761006_IDR_RAW.csv
overlap removed at 3/14/2019, for file:
success, file: CLP_51670597012_759661001_IDR_RAW.csv