

```

import requests
import pprint
import json
import pandas as pd

service_key = 'QLMq9%2Bv0ceRYfwErRiHJm%2BBA3yLLRrIloTFqfZXZcRks3zjgCwTZFbHwSudiD1JgsIRdqwg8wTh%2FRm%2FZ66Mx9A%3D%3D'
openyear = ['2013', '2014', '2015', '2016', '2017', '2018', '2019', '2020', '2021', '2022', '2023', '2024']
openmonth = ['01', '02', '03', '04', '05', '06', '07', '08', '09', '10', '11', '12']

urls = []
for i in range(len(openyear)):
    for j in range(len(openmonth)):
        url = f'https://apis.data.go.kr/B551210/supplyValuePerformanceList/getSupplyValuePerformanceList?serviceKey={service_key}&openYr={openyear[i]}&openMn={openmonth[j]}'
        urls.append(url)

datas = []

for i in range(len(urls)):
    response = requests.get(urls[i])
    contents = response.text
    json_obj = json.loads(contents)
    aa = json_obj['response']['body']['items']['item']
    for j in range(len(aa)):
        try:
            spICalMaxKcal = aa[j]['spICalMaxKcal']
        except:
            spICalMaxKcal = ''
        spIMonth = aa[j]['spIMonth']
        try:
            spICalMaxMj = aa[j]['spICalMaxMj']
        except:
            spICalMaxMj = ''
        spIYear = aa[j]['spIYear']
        try:
            spICalMinMj = aa[j]['spICalMinMj']
        except:
            spICalMinMj = ''
        try:
            spICalCpnm = aa[j]['spICalCpnm']
        except:
            spICalCpnm = ''
        try:
            spICalMinKcal = aa[j]['spICalMinKcal']
        except:
            spICalMinKcal = ''
        data = [spICalMaxKcal, spIMonth, spICalMaxMj, spIYear, spICalMinMj, spICalCpnm, spICalMinKcal]
        print(data)
        datas.append(data)

```

스트리밍 출력 내용이 길어서 마지막 5000줄이 삭제되었습니다.

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[{"id": "10293.303", "month": "01", "year": "2013", "min": "38.907", "max": "9292.843"}, {"id": "10313.366", "month": "02", "year": "2013", "min": "38.986", "max": "9311.566"}, {"id": "10285.182", "month": "02", "year": "2013", "min": "38.876", "max": "9285.264"}, {"id": "10307.395", "month": "02", "year": "2013", "min": "38.962", "max": "9305.994"}, {"id": "10282.077", "month": "02", "year": "2013", "min": "38.863", "max": "9282.366"}, {"id": "10276.584", "month": "02", "year": "2013", "min": "38.842", "max": "9277.240"}, {"id": "10312.888", "month": "02", "year": "2013", "min": "38.984", "max": "9311.120"}, {"id": "10278.494", "month": "02", "year": "2013", "min": "38.849", "max": "9279.022"}, {"id": "10303.812", "month": "02", "year": "2013", "min": "38.948", "max": "9302.650"}, {"id": "10280.883", "month": "02", "year": "2013", "min": "38.859", "max": "9281.252"}, {"id": "10274.673", "month": "02", "year": "2013", "min": "38.834", "max": "9275.456"}, {"id": "10310.500", "month": "02", "year": "2013", "min": "38.974", "max": "9308.892"}, {"id": "10276.584", "month": "02", "year": "2013", "min": "38.842", "max": "9277.240"}, {"id": "10283.749", "month": "02", "year": "2013", "min": "38.870", "max": "9283.926"}, {"id": "10290.675", "month": "02", "year": "2013", "min": "38.897", "max": "9290.390"}, {"id": "10303.095", "month": "02", "year": "2013", "min": "38.946", "max": "9301.981"}, {"id": "10297.841", "month": "02", "year": "2013", "min": "38.925", "max": "9297.078"}, {"id": "10309.067", "month": "02", "year": "2013", "min": "38.969", "max": "9307.554"}, {"id": "10282.316", "month": "02", "year": "2013", "min": "38.864", "max": "9282.589"}, {"id": "10283.271", "month": "02", "year": "2013", "min": "38.868", "max": "9283.480"}, {"id": "10289.004", "month": "02", "year": "2013", "min": "38.890", "max": "9288.831"}, {"id": "10308.828", "month": "02", "year": "2013", "min": "38.968", "max": "9307.331"}, {"id": "10281.599", "month": "02", "year": "2013", "min": "38.862", "max": "9281.920"}, {"id": "10305.962", "month": "02", "year": "2013", "min": "38.957", "max": "9304.657"}, {"id": "10294.975", "month": "02", "year": "2013", "min": "38.914", "max": "9294.403"}, {"id": "10294.019", "month": "02", "year": "2013", "min": "38.910", "max": "9293.511"}, {"id": "10280.644", "month": "02", "year": "2013", "min": "38.858", "max": "9281.029"}, {"id": "10357.075", "month": "02", "year": "2013", "min": "39.156", "max": "9352.357"}, {"id": "10282.077", "month": "02", "year": "2013", "min": "38.863", "max": "9282.366"}, {"id": "10280.405", "month": "02", "year": "2013", "min": "38.857", "max": "9280.806"}, {"id": "10279.927", "month": "02", "year": "2013", "min": "38.855", "max": "9280.360"}]
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[ '10280.644 ', '02', '43.043 ', '2013', '38.858 ', '코원에너지서비스㈜', '9281.029 ']
[ '10289.547 ', '02', '43.080 ', '2013', '38.893 ', '합계', '9289.337 ']
[ '10256.282 ', '03', '42.941 ', '2013', '38.763 ', '(주)경동도시가스', '9258.293 ']
[ '10193.465 ', '03', '42.678 ', '2013', '38.517 ', '(주)대륜이엔에스', '9199.670 ']
[ '10240.040 ', '03', '42.873 ', '2013', '38.699 ', '(주)부산도시가스', '9243.135 ']
[ '10198.959 ', '03', '42.701 ', '2013', '38.539 ', '(주)삼천리', '9204.797 ']
[ '10193.465 ', '03', '42.678 ', '2013', '38.517 ', '(주)에스코', '9199.670 ']
[ '10246.967 ', '03', '42.902 ', '2013', '38.726 ', '(주)에스아이', '9249.600 ']
[ '10219.261 ', '03', '42.786 ', '2013', '38.618 ', '(주)충남도시가스', '9223.744 ']
[ '10243.145 ', '03', '42.886 ', '2013', '38.711 ', '(주)해양도시가스', '9246.033 ']
[ '10197.048 ', '03', '42.693 ', '2013', '38.531 ', '강남도시가스㈜', '9203.013 ']
[ '10219.977 ', '03', '42.789 ', '2013', '38.621 ', '강원도시가스㈜', '9224.412 ']
[ '10241.712 ', '03', '42.880 ', '2013', '38.706 ', '경남에너지㈜(LNG + NG)', '9244.696 ']
[ '10233.591 ', '03', '42.846 ', '2013', '38.674 ', '대성첨정에너지㈜', '9237.117 ']
[ '10209.468 ', '03', '42.745 ', '2013', '38.580 ', '군산도시가스㈜(LNG + NG)', '9214.604 ']
[ '10222.127 ', '03', '42.798 ', '2013', '38.629 ', '대성에너지㈜', '9226.418 ']
[ '10235.502 ', '03', '42.854 ', '2013', '38.681 ', '대화도시가스㈜', '9238.900 ']
[ '10258.670 ', '03', '42.951 ', '2013', '38.772 ', '목포도시가스㈜', '9260.522 ']
[ '10240.279 ', '03', '42.874 ', '2013', '38.700 ', '서라벌도시가스㈜', '9243.358 ']
[ '10196.092 ', '03', '42.689 ', '2013', '38.527 ', '서울도시가스㈜', '9202.121 ']
[ '10206.841 ', '03', '42.734 ', '2013', '38.569 ', '서해도시가스㈜(LNG + NG)', '9212.153 ']
[ '10217.827 ', '03', '42.780 ', '2013', '38.612 ', '영남에너지서비스㈜ 구미', '9222.405 ']
[ '10236.457 ', '03', '42.858 ', '2013', '38.685 ', '영남에너지서비스㈜ 포항', '9239.792 ']
[ '10189.882 ', '03', '42.663 ', '2013', '38.503 ', '인천도시가스㈜', '9196.326 ']
[ '10235.980 ', '03', '42.856 ', '2013', '38.683 ', '전남도시가스㈜', '9239.346 ']
[ '10241.234 ', '03', '42.878 ', '2013', '38.704 ', '전북도시가스㈜', '9244.250 ']
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urls_2025 = []
months_2025 = ['01', '02', '03', '04', '05', '06', '07', '08', '09', '10']
for i in range(10):
    url = f'https://apis.data.go.kr/B551210/supplyValuePerformanceList/getSupplyValuePerformanceList?serviceKey={service_key}&openYr=2025&month={months_2025[i]}'
    urls_2025.append(url)
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for i in range(len(urls_2025)):
    response = requests.get(urls_2025[i])
    contents = response.text
    json_obj = json.loads(contents)
    aa = json_obj['response']['body']['items'][i]
    for j in range(len(aa)):
        try:
            splCalMaxKcal = aa[j]['splCalMaxKcal']
        except:
            splCalMaxKcal = ''
        splMonth = aa[j]['splMonth']
        try:
            splCalMaxMj = aa[j]['splCalMaxMj']
        except:
            splCalMaxMj = ''
        splYear = aa[j]['splYear']
        try:
            splCalMinMj = aa[j]['splCalMinMj']
        except:
            splCalMinMj = ''
        try:
            splCalCpnm = aa[j]['splCalCpnm']
        except:
            splCalCpnm = ''
        try:
            splCalMinKcal = aa[j]['splCalMinKcal']
        except:
            splCalMinKcal = ''
        data = [splCalMaxKcal, splMonth, splCalMaxMj, splYear, splCalMinMj, splCalCpnm, splCalMinKcal]
        print(data)
        datas.append(data)
```

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[ '10262.73 ', '01', '42.968 ', '2025', '38.788 ', '(주)경동도시가스', '9264.311 ']
[ '10254.61 ', '01', '42.934 ', '2025', '38.756 ', '(주)귀뚜라미에너지', '9256.733 ']
[ '10242.429 ', '01', '42.883 ', '2025', '38.708 ', '(주)대륜이엔에스', '9245.365 ']
[ '10284.227 ', '01', '43.058 ', '2025', '38.872 ', '(주)미래엔서해에너지', '9284.373 ']
[ '10283.032 ', '01', '43.053 ', '2025', '38.867 ', '(주)부산도시가스', '9283.257 ']
[ '10243.623 ', '01', '42.888 ', '2025', '38.713 ', '(주)삼천리', '9246.479 ']
[ '10240.996 ', '01', '42.877 ', '2025', '38.703 ', '(주)에스코', '9244.028 ']
[ '10286.854 ', '01', '43.069 ', '2025', '38.882 ', '(주)제주도시가스', '9286.824 ']
[ '10261.536 ', '01', '42.963 ', '2025', '38.783 ', '(주)지에스아이', '9263.196 ']
[ '10256.998 ', '01', '42.944 ', '2025', '38.765 ', '(주)해양에너지', '9258.961 ']
[ '10256.043 ', '01', '42.94 ', '2025', '38.762 ', '강원도시가스(주)', '9258.07 ']
[ '10286.854 ', '01', '43.069 ', '2025', '38.882 ', '경남에너지(주)', '9286.824 ']
[ '10287.809 ', '01', '43.073 ', '2025', '38.886 ', '군산도시가스(주)', '9287.715 ']
[ '10272.045 ', '01', '43.007 ', '2025', '38.824 ', '대성에너지(주)', '9273.004 ']
[ '10269.896 ', '01', '42.998 ', '2025', '38.816 ', '대성첨정에너지(주)', '9270.998 ']
[ '10239.085 ', '01', '42.869 ', '2025', '38.695 ', '대화도시가스(주)', '9242.244 ']
[ '10237.891 ', '01', '42.864 ', '2025', '38.691 ', '명성파워그린(주)', '9241.13 ']
[ '10254.849 ', '01', '42.935 ', '2025', '38.757 ', '서라벌도시가스(주)', '9256.956 ']
[ '10257.954 ', '01', '42.948 ', '2025', '38.769 ', '서울도시가스(주)', '9259.854 ']
[ '10284.943 ', '01', '43.061 ', '2025', '38.875 ', '씨엔씨티에너지(주)', '9285.041 ']
[ '10246.489 ', '01', '42.9 ', '2025', '38.724 ', '엠씨에너지(주)', '9249.154 ']
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['10286.137', '01', '43.066', '2025', '38.879', '영남에너지서비스(주)구미', '9286.155']
['10254.61', '01', '42.934', '2025', '38.756', '영남에너지서비스(주)포항', '9256.733']
['10281.122', '01', '43.045', '2025', '38.86', '인천도시가스(주)', '9281.475']
['10224.993', '01', '42.81', '2025', '38.64', '전남도시가스(주)', '9229.093']
['10267.03', '01', '42.986', '2025', '38.805', '전북도시가스(주)', '9268.324']
['10283.271', '01', '43.054', '2025', '38.868', '전북에너지서비스(주)', '9283.48']
['10234.786', '01', '42.851', '2025', '38.679', '제이비(주)', '9238.232']
['10258.431', '01', '42.95', '2025', '38.771', '참빛도시가스(주)', '9260.299']
['10235.98', '01', '42.856', '2025', '38.683', '참빛영동도시가스(주)', '9239.346']
['10254.61', '01', '42.934', '2025', '38.756', '참빛원주도시가스(주)', '9256.733']
['10256.759', '01', '42.943', '2025', '38.764', '참빛충북도시가스(주)', '9258.738']
['10239.801', '01', '42.872', '2025', '38.698', '충청에너지서비스(주)', '9242.912']
['10235.98', '01', '42.856', '2025', '38.683', '코원에너지서비스(주)', '9239.346']
['10255.087417598166', '01', '42.936', '2025', '38.75795407200001', '합계', '9257.17829177415']
['10246.967', '02', '42.902', '2025', '38.726', '(주)경동도시가스', '9249.6']
['10173.402', '02', '42.594', '2025', '38.439', '(주)귀뚜라미에너지', '9180.946']
['10231.681', '02', '42.838', '2025', '38.666', '(주)대륜이엔에스', '9235.334']
['10151.428', '02', '42.502', '2025', '38.353', '(주)미래엔서해에너지', '9160.439']
['10260.342', '02', '42.958', '2025', '38.778', '(주)부산도시가스', '9262.082']
['10161.938', '02', '42.546', '2025', '38.394', '(주)삼천리', '9170.247']
['10182.478', '02', '42.632', '2025', '38.474', '(주)예스코', '9189.416']
['10307.156', '02', '43.154', '2025', '38.961', '(주)제주도시가스', '9305.771']
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['10182.956', '02', '42.634', '2025', '38.476', '(주)해양에너지', '9189.862']
['10241.951', '02', '42.881', '2025', '38.707', '강원도시가스(주)', '9244.919']
['10262.73', '02', '42.968', '2025', '38.788', '경남에너지(주)', '9264.311']
['10158.355', '02', '42.531', '2025', '38.38', '군산도시가스(주)', '9166.904']
['10246.967', '02', '42.902', '2025', '38.726', '대성에너지(주)', '9249.6']
['10176.029', '02', '42.605', '2025', '38.449', '대성첨정에너지(주)', '9183.398']
['10201.825', '02', '42.713', '2025', '38.55', '대학도시가스(주)', '9207.472']
['10224.037', '02', '42.806', '2025', '38.637', '명성파워그린(주)', '9228.201']
['10248.639', '02', '42.909', '2025', '38.733', '서라벌도시가스(주)', '9251.16']
['10217.589', '02', '42.779', '2025', '38.611', '서울도시가스(주)', '9222.183']
['10157.877', '02', '42.529', '2025', '38.378', '씨엔씨티에너지(주)', '9166.457']
['10176.746', '02', '42.608', '2025', '38.452', '엠씨에너지(주)', '9184.067']
['10168.386', '02', '42.573', '2025', '38.419', '영남에너지서비스(주)구미', '9176.265']
['10248.877', '02', '42.91', '2025', '38.734', '영남에너지서비스(주)포항', '9251.382']

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spldf = pd.DataFrame(datas)
spldf.columns = ['spICalMaxKcal', 'spIMonth', 'spICalMaxMj', 'spIYear', 'spICalMinMj', 'spICalCpnm', 'spICalMinKcal']

spldf_total = spldf[spldf['spICalCpnm']=='합계']
spldf = spldf[spldf['spICalCpnm']!='합계']
spldf = spldf[spldf['spICalCpnm']!='']

spldf = spldf.reset_index()
spldf_total = spldf_total.reset_index()

spldf[[ 'spICalMaxKcal', 'spICalMinKcal', 'spICalMaxMj', 'spICalMinMj']] = spldf[['spICalMaxKcal','spICalMinKcal', 'spICalMaxMj', 'spICalMinMj']]
spldf_total[[ 'spICalMaxKcal', 'spICalMinKcal', 'spICalMaxMj', 'spICalMinMj']] = spldf_total[['spICalMaxKcal','spICalMinKcal', 'spICalMaxMj', 'spICalMinMj']]

spldf['spIym'] = spldf['spIYear'] + '-' + spldf['spIMonth']
spldf_total['spIym'] = spldf_total['spIYear'] + '-' + spldf_total['spIMonth']

# 이상치 처리
spldf_total.loc[53,'spICalMinKcal'] = 9201.23
spldf.drop([4276], axis=0, inplace=True)

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spldf.to_csv('spldf.csv')
spldf_total.to_csv('spldf_total.csv')

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