AI-powered Optimal Management of Your Electricity Bill

XVPP Energy Saver

SERVICE INTRODUCTION

EIPGRID

Version 1.5 | November 2024

XVPP LAMS

XVPP BESS Ops

XVPP Solar Ops

XVPP EIP

XVPP EnergySaver+Gen

XVPP Amadeus

XVPP EnergySaver

XVPP D1

XVPP 중개거래자원 발전예측

XVPP D2

XVPP ADMS

XVPP EnergySaver

SERVICE INTRODUCTION

Contents

XVPP EnergySaver Introduction

XVPP EnergySaver `Premium`

Who can benefit

from XVPP EnergySaver?

Factory
Large-scale industrial facilities such as factories, industrial complex, etc.

Hospital
Advanced medical institutions such as general hospitals

Commercials
Large-scale commercial facilities such as hotels and markets

Buildings
Buildings and complexes with offices and shopping

University
University campus

Any energy-intensive customer looking to enhance energy efficiency and lower electricity costs.

Unsure how to reduce the constantly rising electricity bill.

I wonder how efficient I am with the power consumption.

I've been using the energy as usual, why is my bill so high?

I'd like to know my expected energy bill in advance and act accordingly.

What energy rate plan would be the most cost-efficient?

I want to manage multiple facilities' electricity consumption all at once

Simple and convenient!
Get notified for every update

No more tedious logins or app installations—experience complete energy efficiency with a single sign-up.

Abnormal Power Consumption Detection

Get notified if there's an unusual spike in electricity usage, as the system detects irregular patterns.

Weekly Power Pattern Analysis

Track changes in usage trends compared to the previous week, view the weekly peak load, and analyze daily consumption patterns.

Maximum Demand Analysis

Estimate your electricity bill by comparing maximum demand, billing power, and base charges to anticipate any changes.

Electricity Bill Analysis

Review electricity cost trends over the past three months and explore opportunities to improve energy efficiency.

Applicable Power Charge Notification

Stay informed about the power levels impacting your electricity bill. Receive alerts when you approach, reach, or exceed the standard threshold."

Monthly Power Pattern Analysis

Access detailed pattern analysis with comparisons to monthly maximum and average loads, weekly and daily usage trends, and billing power

Monthly Electricity Bill Report

Compare this month's electricity bill to those of last month and the previous year, and view detailed itemized charges

Forecast of This Month's Electricity Bill

Based on your current usage pattern, predict what your electricity bill will be. Being informed in advance allows you to take proactive measures to enhance energy efficiency.

Korea, Japan, and Beyond:
A Seamless, Borderless Service

Supporting major messaging services in each country.

Our platform integrates with leading messengers in each country,
including Kakao Talk, LINE, WhatsApp, and more.
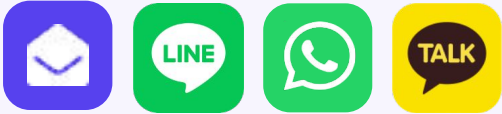
Multilingual Support

We offer support in Korean, English, and Japanese,
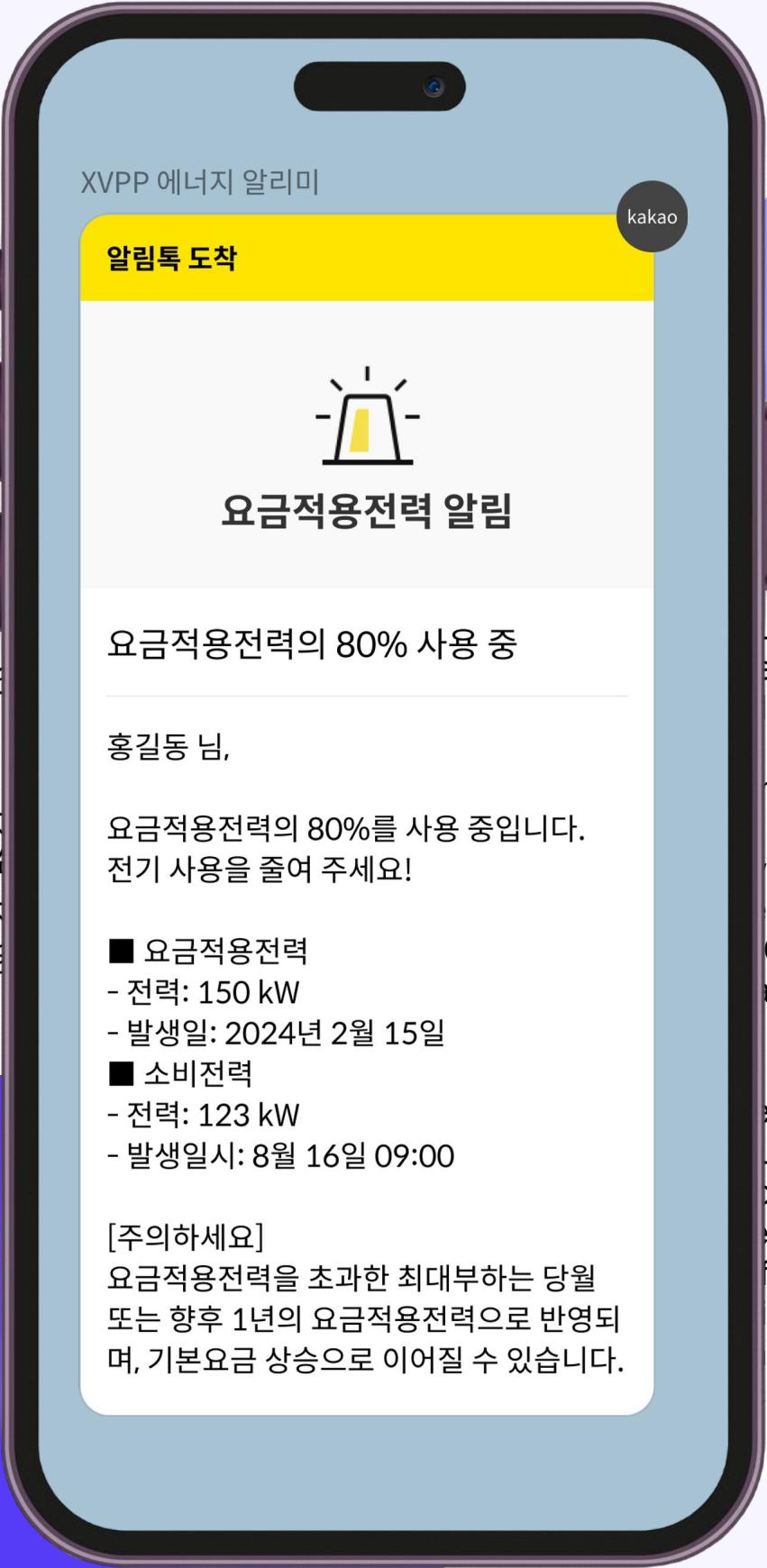with the capability to expand based on your needs.

契約電力のお知らせ

[契約電力の超過使用

〇〇〇さま
現在の使用量が契約電
超えています。
直ちに電力使用量を減
しょう！

■契約電力：150kW
■現在の消費電力：16

【注意しましょう】
契約電力を超えた最大
は、当月または今後1年
電力に反映され、基本
き上げにつながる可能
ます。

XVPP 에너지 알리미

알림톡 도착

요금적용전력 알림

요금적용전력의 80% 사용 중

홍길동 님,

요금적용전력의 80%를 사용 중입니다.
전기 사용을 줄여 주세요!

■ 요금적용전력
- 전력: 150 kW
- 발생일: 2024년 2월 15일
■ 소비전력
- 전력: 123 kW
- 발생일시: 8월 16일 09:00

[주의하세요]
요금적용전력을 초과한 최대부하는 당월
또는 향후 1년의 요금적용전력으로 반영되
며, 기본요금 상승으로 이어질 수 있습니다.

Allowable Power Usage
med

ustomer,

e currently using 80% of
owable power usage.
reduce your electricity
mption!

able Power Usage: 150
bruary 2024) ■ Current
Consumption: 123 kW ■
ation Date: August 16,

e be cautious] If the
um load exceeds the
ble power usage, it will be
d in the allowable power
for this month or the
ng year, which may result
crease in the basic
ity fee.

Simplifying complex and challenging energy issues

Simply sign up, and we'll take care of the
complex data analysis for you.

Customer

EnergySaver

SERVICE
SIGN UP

LINKING
THE
MESSENGER

Anomaly
detection
alerts

Maximum load
pattern
analysis report

Power tariff
analysis
report

Electricity bill
analysis
report

Weekly/monthly
usage analysis
report

COLLECTING
THE DATA

USAGE
PATTERN
ANALYSIS

COST
EFFICIENCY
ANALYSIS

ENERGY
EFFICIENCY
OPTIMIZATION
ANALYSIS

DATA
AGGREGATION

**Monitoring
Engine**

Data Pools **+ AI** ⟳

Various analytical and predictive models
Tracking usage and reflecting real-time data

Building a Life of Abundant Energy Together.

Individually and collectively,
the XVPP product line connects and evolves continuously.
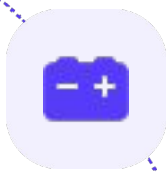
XVPP BESS Ops X EnergySaver
- Anomaly detection and operation schedule notifications for BESS.
- Subscription to performance analysis reports for BESS operations
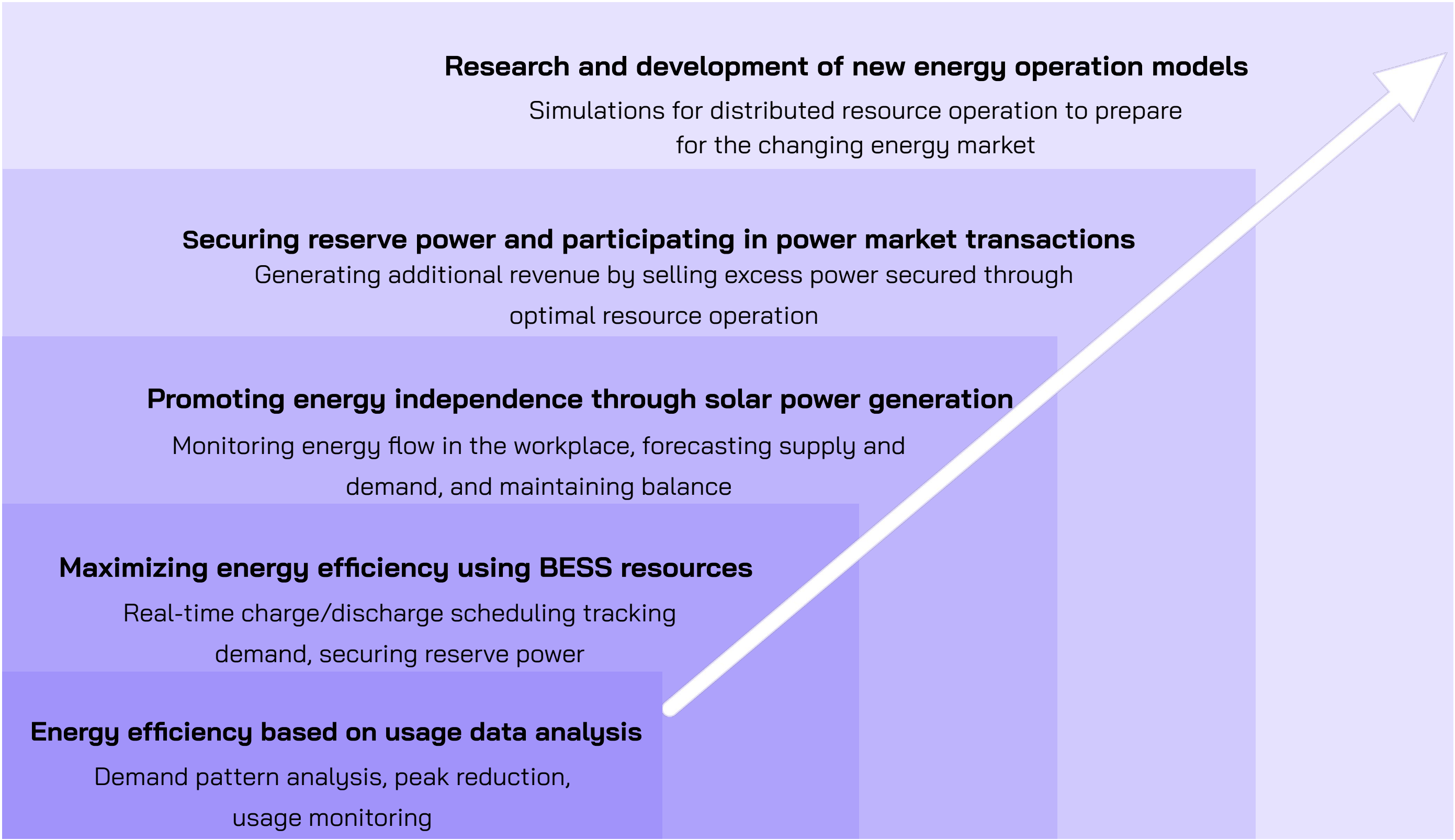
XVPP Solar Ops X EnergySaver
- Solar power generation monitoring and anomaly detection notifications
- Subscription to daily/weekly/monthly generation performance analysis reports

XVPP Amadeus X EnergySaver
- Self-DR schedule notifications
- Proposing simulations for distributed energy resource operation

XVPP EnergySaver Development Roadmap

Research and development of new energy operation models
Simulations for distributed resource operation to prepare for the changing energy market

Securing reserve power and participating in power market transactions
Generating additional revenue by selling excess power secured through optimal resource operation

Promoting energy independence through solar power generation
Monitoring energy flow in the workplace, forecasting supply and demand, and maintaining balance

Maximizing energy efficiency using BESS resources
Real-time charge/discharge scheduling tracking demand, securing reserve power

Energy efficiency based on usage data analysis
Demand pattern analysis, peak reduction, usage monitoring

Premium Energy Service

XVPP EnergySaver

X BESS X Solar Ops

Maximize energy efficiency
by connecting batteries and photovoltaic resources

Premium service customer analysis

Advanced institutions such as general hospitals

We help alleviate the financial burden of high energy costs caused by soaring prices, fluctuating exchange rates, rising interest rates, and increasing electricity bills
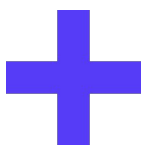
Open 24/7 year-round

HVAC and life support systems remain operational, ensuring a stable power supply even during emergencies like blackouts.

Ensure Safe Care with Diverse Equipment

Utilize high-power medical and surgical equipment, and maintain the operating infrastructure for various medical devices.

+

ENERGY COST PRESSURE

High prices, elevated interest rates, and increasing electricity bills
Limited budget for investments in energy infrastructure

Service Recommendation: Guaranteed Electricity Bill Reduction Rate (%)!

You can reduce your electricity bills without incurring any additional costs

VPP

Battery + Load Management Energy Cost Reduction Services

Customer

Service Fee: $0

How?
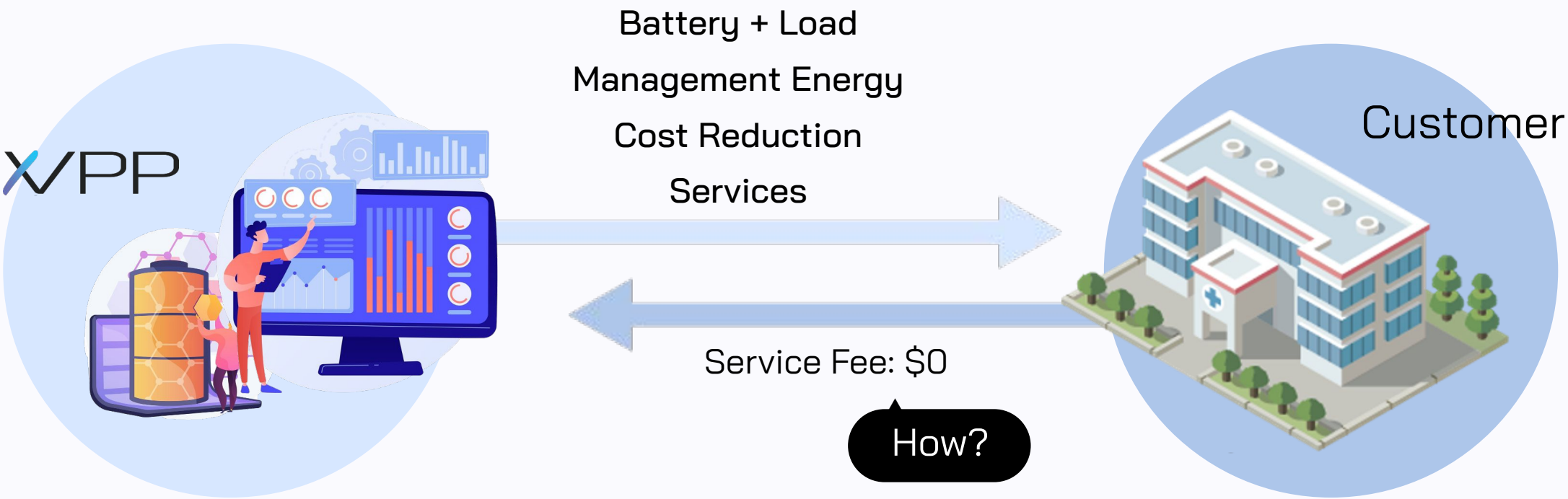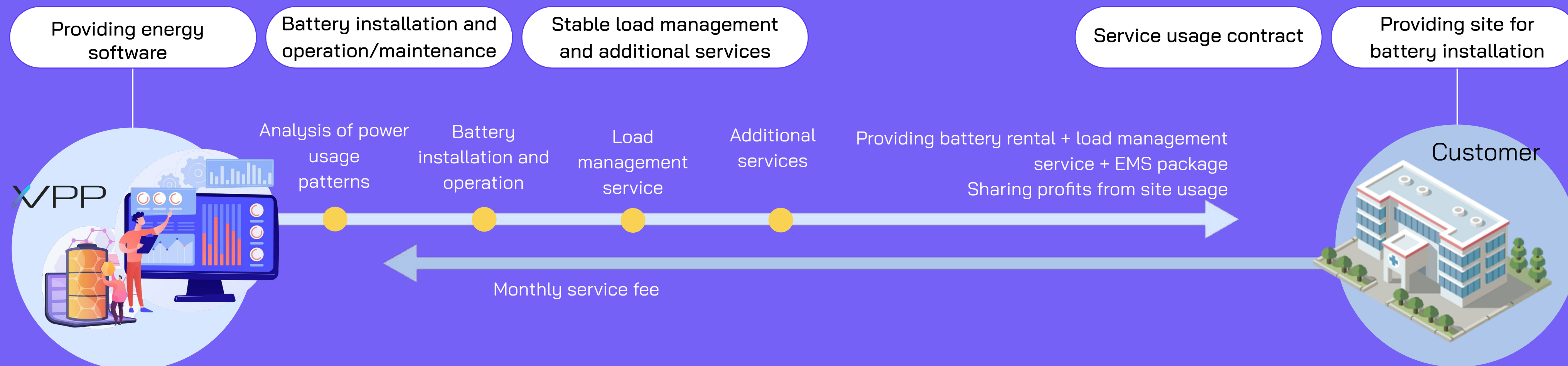
What is Guaranteed Electricity Bill Reduction Rate (%)?

- Regardless of the actual savings, we guarantee a percentage reduction in your electricity bill

- We also offer discounts on service fees by providing suitable locations within the facility for rental battery installation

- The monthly service fee is deducted from your energy cost savings, resulting in no actual additional costs

Minimize initial high investment risks with rental batteries

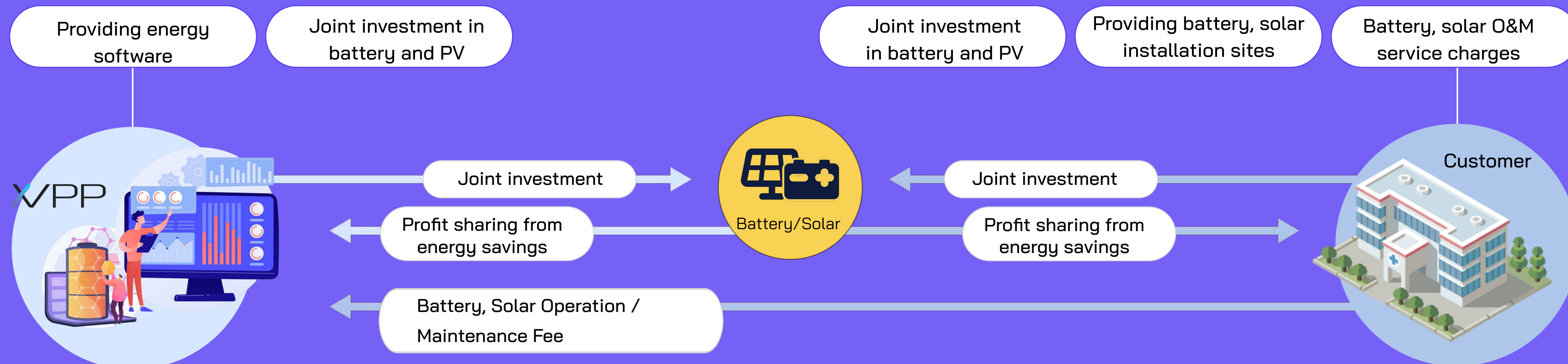300 kWh to 1 MWh based on load analysis results

Enjoy guaranteed savings on electricity rates

Benefit from reliable load management and opportunities for additional revenue generation.

Providing energy software

Battery installation and operation/maintenance

Stable load management and additional services

Service usage contract

Providing site for battery installation

VPP

Analysis of power usage patterns

Battery installation and operation

Load management service

Additional services

Providing battery rental + load management service + EMS package
Sharing profits from site usage

Customer

Monthly service fee

Co-Equity Investment and Profit Sharing Model

Investment ratio adjustment available

Continued energy cost savings even after recovery of investment costs*

*The payback period is calculated based on the annual savings of the customer and the initial costs spent

Stable load management and additional revenue generation

Joint investment in energy cost reduction infrastructure (battery and/or solar), considering the equity ratio of XVPP and the customer
The payback period may vary depending on the joint investment structure

Providing energy software

Joint investment in battery and PV

Joint investment in battery and PV

Providing battery, solar installation sites

Battery, solar O&M service charges

XVPP

Joint investment →

← Joint investment

Battery/Solar

Profit sharing from energy savings

Profit sharing from energy savings

Battery, Solar Operation / Maintenance Fee

Customer

Service Delivery Process

⚡ Deciding on the service package level after analyzing the energy use pattern (2-3 months)

⚡ Ensuring energy cost reduction through AI-driven load optimization and battery usage

Consultation on the service application site → Pilot project for selected sites → Generating Pilot Results Report → Calculating target reduction rate based on Pilot report → Commercial service charge calculation → Service contract → Commercial Service Launch

Pilot Project Charges
Differential agreement is made based on the number/complexity of managed facilities and the amount of power used in the PoC site

Commercial service charge
The basic service fee plus the savings commission is calculated based on the energy costs saved through the service.

No additional costs!

Service Implementation Benefits

Reduce energy costs, stable energy supply, and integrated management of energy resources

Maximize cost savings by installing distributed resources such as batteries and solar power

Leverage AI-powered energy management to minimize additional energy costs

Significantly Reduce Energy Costs by Lowering Peak Demand and Contract Capacity for Distributed Resources

AI-Based Load Optimization: Reduces Basic Energy Costs

+

AI-Driven Automatic Integration and Portfolio Optimization: Enhances Infrastructure for New Energy Resources such as Solar, Batteries, Electric Vehicles, and Charging Infrastructure, Leading to Reduced Additional Energy Costs

Average
15%
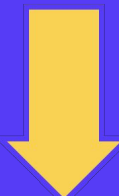
Energy Integration Monitoring and AI-Based Advanced System Operation Ensure a Stable Energy Supply

Integrated management of energy resources within facilities, including air conditioning, electric vehicle infrastructure, emergency generators, and distributed power supplies

Comprehensive resource monitoring dashboard that incorporates existing ICT infrastructure within the facility.

Real-time response to emergency situations by organizing and managing a portfolio of available resources using AI.

Ensuring stable energy supply even in emergencies

Providing integrated monitoring of existing infrastructure and energy resources

Get Started:
Your Energy Secretary
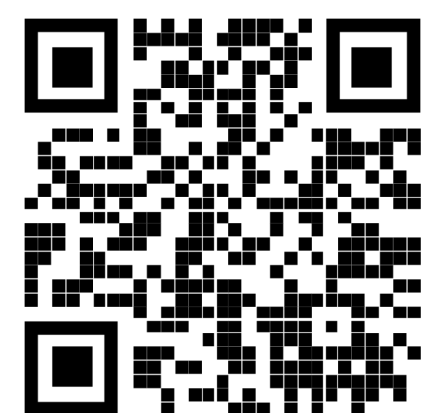# at Your Fingertips

VPP EnergySaver

WEBSITE	www.eipgrid.com
EMAIL	contact@eipgrid.com
SERVICE INQUIRY	www.eipgrid.com/contact

Energize our life

EIPGRID

Appendix

High level project plan and requirements

Pilot Project Phases and Requirements (sample)

Phase	Step	Lead Party / Supporting Party	Requirements
1. Pilot Site selection	1.1. Available site list up 1.2. Site review : ○ Contract capacity ○ Data accessibility ○ Compliance with laws and building codes ○ Existing energy management system compatibility assessment 1.3. Site selection (recommended contract capacity : > 500 kW) 1.4. Project task force establishment	Lead Party : Client Supporting Party : EIPGRID	- Site contract capacity information - Power bill information - Metering data access information (Y/N) - Applicable laws and building codes availability - Existing EMS specifications
2. Pilot project running	2.1. Data access establishment (API matching or additional metering device installation and interfacing) 2.2. Load data analysis : ○ Load disaggregation ○ Load flexibility potential assessment ○ Baseline calculation 2.3. Optimized load profile calculation 2.4. Optimized load implementation (manually by default) 2.5. Optimized load data acquisition and analysis 2.6. PoC report generation and sharing	Lead Party : EIPGRID Supporting Party : Client	- Metering data access (API or via additional H/W installation) - Cloud infrastructure establishment (Korea cloud infra recommended for PoC)
3. Proof of concept results review	3.0. Assessment of energy savings impacts on operations 3.1. Scalability assessment (additional load savings, deployment to multiple sites, DER investments, etc.) 3.2. Commercial scale solution design 3.3. Commercial scale cost / savings potential assessment	Lead Party : EIPGRID Supporting Party : Client	
4. Commercial phase design	4.1. Additional sites selection 4.2. Commercial phase cost / scale calculation	Lead Party : Client Supporting Party : EIPGRID	

Commercial Project Phases and Requirements (sample)

Phase	Step	Lead Party / Supporting Party	Requirements / Details
1. Scoping and Contracting	1.1. Statement of Work draft 1.2. Service Agreement draft and review 1.3. Service Agreement signage	Lead : Client Support: EIPGRID	- Contract capacity information - Power bill information
2. Service readiness	2.1. Additional H/W procurement	Lead : Client Support: EIPGRID	- Metering IoT and/or Load control IoT (X00 USD ballpark cost)
	2.2. Additional H/W installation and testing	Lead : Client Support: EIPGRID	- On-site person in charge on client side
	2.3. Cloud infrastructure setup and configuration	Lead : EIPGRID Support : Client	- Project country or region infra setup recommended (X000 USD ballpark annual cost)
3. Service start	3.1. Staff training	Lead : EIPGRID Support : Client	- Administrator and operator designated roles on client's side
4. Service Operation & Maintenance	Monitoring, Evaluation, Continuous improvement	Lead : Client Support : EIPGRID	