



HỘI KHOA HỌC VÀ CÔNG NGHỆ SỬ DỤNG NĂNG LƯỢNG  
TIẾT KIỆM VÀ HIỆU QUẢ VIỆT NAM



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# SURVEY RESULTS

## CURRENT CAPACITY OF PROVINCIAL PUBLIC INSTITUTIONS AND RECOMMENDATIONS FOR NEXT STEPS

Hanoi, February 2022





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# SURVEY RESPONDENTS AND SCOPE



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## SURVEY OBJECTIVES

- ❖ To collect data on provincial-level public institutions/enterprises in energy efficiency.
- ❖ To evaluate the capacity of provincial-level public institutions/enterprises on energy efficiency, in terms of:
  - ❖ *Organizational structure,*
  - ❖ *Facilities,*
  - ❖ *Personnel,*
  - ❖ *Experience in energy efficiency,*
  - ❖ *Budget for energy efficiency activities*
- ❖ To propose capacity building activities on energy efficiency for provincial-level public institutions/enterprises



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## SURVEY RESPONDENTS

- ❖ Industrial Promotion and Development Consultancy Center under the Ministry of Industry and Trade (hereinafter referred to as IDC) and other public institutions under the Ministry of Science and Technology (MOST).
- ❖ Provincial-level public enterprises directly involving in local energy efficiency services which currently are local power companies (PC) under Vietnam Electricity



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## SCOPE OF THE SURVEY

- ❖ Total number of survey forms sent to the units: 129
  - ❖ *Number of survey forms sent to IDCs: 62*
  - ❖ *Number of survey forms sent to PCs: 66*
  - ❖ *Number of survey forms sent to other units: 1*
- ❖ Total number of individuals selected for interview: 10
  - ❖ *Total number of IDC individuals selected for interview: 7*
  - ❖ *Total number of PC individuals selected for interview: 3*



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# IMPLEMENTATION PLAN

## ❖ Survey - interview plan

- ❖ Prepare 02 survey forms for 02 separate groups of respondents:
  - Public institutions;
  - Public enterprises
- ❖ Make a list of survey and interview respondents
- ❖ Contact and send the survey forms via different ways, e.g. phone, email, zalo, messenger, post, etc.
- ❖ Contact and schedule interviews with interviewees;
- ❖ Conduct interviews in various forms, e.g. face-to-face interview, online interview, telephone interview, etc.



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# SURVEY PLAN

No.	Tasks	WEEK				Respondents
		3	4	5	6	
1	Plan and finalize the list of respondents (Full name, contact details)	■				- Provincial-level power companies - Provincial-level centers for Industrial promotion and Industrial development consultancy,
	Design and develop survey forms (Word file and online file). Send to GIZ for comments and approval	■				
2	Directly call the respondents in the approved list	■	■			Industrial promotion and Industrial development consultancy, Industrial promotion and Energy conservation centers
	Send the survey forms via email, post, chat channels and social networking sites, e.g. zalo, facebook, etc. (if any)	■	■			
	Submit the survey and data collection forms by post (if necessary)	■	■			
	Compile and standardize data into Excel files for tracking	■	■			
3	Monitor and ensure the survey schedule		■			Industrial promotion and Energy conservation centers
	Check and verify the provided data		■	■	■	
	Conduct data assessment and analysis			■	■	
	Prepare a draft survey report with conclusions and recommendations			■	■	



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# INTERVIEW PLAN

No.	Tasks	WEEK				Subject
		3	4	5	6	
1	Plan and complete the list of respondents (Full name, contact details)	■				- Provincial-level power companies
	Design and develop survey forms, send to GIZ for comments and approval	■				
2	Directly call to schedule interviews with the respondents according to the approved list	■	■			- Provincial-level centers for Industrial promotion and Industrial development consultancy,
	Send the surveys by email for the interviewees to prepare in advance	■	■			
	Conduct interviews as scheduled	■	■			
	Compile responses	■	■			
3	Monitor and ensure the interview schedule		■			Industrial promotion and Energy conservation centers
	Prepare meeting minutes (MoM) capturing most of the important opinions of the interviewees		■	■	■	
	Integrate evaluation criteria and collected data into a provided form			■	■	
	Prepare a draft survey report with conclusions and recommendations			■	■	

# PRELIMINARY RESULTS



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No.	Respondent	Interview	Survey
1	Provincial-level centers for Industrial promotion and Industrial development consultancy, Industrial promotion and Energy conservation centers	7	28
2	Provincial-level power companies	3	17
	<b>Total</b>	<b>10</b>	<b>45</b>



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# SURVEY RESULTS

# SURVEY RESULTS OF LOCAL POWER COMPANIES

## ❖ In terms of organizational structure

Criteria	Group 1	Group 2	Group 3
1.1. Number of permanent and contractual employees	15 out of 20 units with under 1000 employees	4 out of 20 units with 1000 to 2000 employees	1 out of 20 units with over 2000 employees
1.2. Number of specialized and professional departments/divisions in your unit	None of the units with under 10 departments/divisions	14 out of 20 units with 10 to 20 departments/divisions	6 out of 20 units with over 20 departments/divisions
1.3. Number of departments/divisions specialized in EE management	1 out of 20 units without departments/divisions	14 out of 20 units with 1 to 3 departments/divisions	5 out of 20 units with over 3 departments/divisions
1.4. Number of full-time EE employees	16 out of 20 units without full-time employees	3 out of 20 units with 1 to 3 full-time employees	1 out of 20 units with over 3 full-time employees
1.5. Number of concurrent EE employees in the unit	2 out of 20 units without concurrent employees	17 out of 20 units with 1 to 10 concurrent employees	1 out of 20 units with over 10 concurrent employees

# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)



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## ❖ In terms of facilities

Criteria	Group 1	Group 2	Group 3
2.1. Number of EE-serving equipment pieces	13 out of 20 units without equipment	4 out of 20 units with 1 to 10 pieces	3 out of 20 units with over 10 pieces
2.2. Number of EE-serving vehicles	14 out of 20 units without vehicles	4 out of 20 units with 1 to 2 vehicles	2 out of 20 units with over 2 vehicles
2.3. Number of EE-serving specialized meters	16 out of 20 units without meters	2 out of 20 units with 1 to 5 meters	2 out of 20 units with over 5 meters

## ❖ In terms of personnel

Criteria	Group 1	Group 2	Group 3
3.1. Number of EE-trained employees in the past 5 years	8 out of 20 units without employees	5 out of 20 units with 1 to 5 employees	7 out of 20 units with over 5 employees
3.2. Number of certified energy auditors (CEA)	13 out of 20 units without CEAs	6 out of 20 units with 1 to 5 CEAs	1 out of 20 units with over 5 CEAs (54 CEAs)
3.3. Average number of years of experience of EE-trained employees in the past 5 years	13 out of 20 units without experience	4 out of 20 units with 1 to 5 years	3 out of 20 units with over 5 years

# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)



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## ❖ In terms of experience in energy efficiency

Criteria	Group 1	Group 2	Group 3
4.1. Number of programs on energy saving communication, advocacy and dissemination to customers in the last 5 years	7 out of 20 units having under 10 programs	9 out of 20 units having 10 to 30 programs	4 out of 20 units having over 30 programs
4.2. Number of customers consulted about energy conservation solutions in the last 5 years	2 out of 20 units having no customers consulted	10 out of 20 units having 1 to 100 customers consulted	8 out of 20 units having over 100 consulted customers
4.3. Number of customers supported in energy efficiency: energy audit, development of energy management models, implementation of energy conservation solutions, etc.	5 out of 20 units having no supported customers	10 out of 20 units having 1 to 100 supported customers	5 out of 20 units having over 100 supported customers
4.4. Provincial/city-level science and technology programs on EE	16 out of 20 units having no programs	2 out of 20 units having 1 to 3 programs	2 out of 20 units having over 3 programs
4.5. National programs on energy efficiency and conservation	10 out of 20 units having no programs	3 out of 20 units having 1 to 3 programs	7 out of 20 units having over 3 programs
4.6. EE cooperation programs and projects with international organizations	100% of units having no international cooperation projects		
4.7. Other programs	18 out of 20 units having no other programs	1 out of 20 units having 1 to 5 programs	1 out of 20 units having over 5 programs

# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)



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## ❖ In terms of budget allocation for energy efficiency

Criteria	Group 1	Group 2	Group 3
5.1. Proportion of the budget spent on EE in the unit's total annual operating budget	7 out of 20 units with 0%	8 out of 20 units with under 1%	3 out of 20 units with over 1%
5.2. Budget allocated from higher level units (Corporations/Groups)	10 out of 20 units with 0%	7 out of 20 units with under 1%	3 out of 20 units with 1%
5.3. Budget allocated from customer services	10 out of 20 units with 0%	6 out of 20 units with under 10%	4 out of 20 units with over 10%
5.4. Other sources	100% units without other sources		
5.5. Proportion of budget spent on EE equipment procurement/total operating budget (if any)	16 out of 20 units with 0%	3 out of 20 units with under 5%	1 out of 20 units with 5% or above

## DIFFICULTIES AND CHALLENGES FACED BY PCs IN ENERGY EFFICIENCY ACTIVITIES



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- ❖ Existing employees are concurrently in charge of monitoring energy efficiency, so the quality is not high, and they do not have much experience in energy efficiency;
- ❖ There is a lack of equipment for energy efficiency activities;
- ❖ Difficulties remain in the coordination with customers (not fully aware of energy audit, not accepting large investments, etc.);
- ❖ Difficulties remain in budget to implement energy conservation solutions; The mechanism to support enterprises' investment in replacing production lines faces many limitations.
- ❖ Key/designated energy users make unstable production, thereby affecting the energy efficiency activities;
- ❖ Although many communications on energy conservation have been in place in various forms, many electricity users have not yet gained access or changed their power consumption habits, or have no interest in energy conservation;
- ❖ The programs usually take place in the second and third quarter annually when there are adverse weather conditions such as local severe hot weather, which necessitates the demand response, thus affecting the electricity demand of customers.
- ❖ The program implementation by MOIT has encountered many difficulties and complicated procedures.

# EVALUATION



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- ✓ PCs all have departments/divisions in charge of energy conservation, but most of them do not have any full-time staff for energy efficiency activities,
- ✓ Most PCs do not have specialized equipment and facilities for energy efficiency activities,
- ✓ Most PCs do not have staff trained in energy efficiency, or the trained staff are no longer in charge of such activities,
- ✓ Most of the energy efficiency activities by PCs focus on communicating energy conservation and mobilizing enterprises to participate in demand response,
- ✓ The budget allocated for energy efficiency activities by PCs is still limited, and mostly from customer services.



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# SURVEY RESULTS OF INDUSTRIAL PROMOTION/ ENERGY CONSERVATION CENTERS

❖ In terms of organizational structure

Criteria	Group 1	Group 2	Group 3
1.1. Number of permanent and contractual employees	63% of units with under 20 employees	26% units with 20 to 40 employees	11% of units with over 40 employees
1.2. Number of specialized and professional departments/divisions in your unit	None of the units with under 2 departments/divisions	86% of units with 2 to 4 departments/divisions	14% of units with over 5 departments/divisions
1.3. Number of EE-related employees in your unit	49% of units with under 5 employees	43% of units with 5 to 10 employees	8% of units with over 10 employees

# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)

## ❖ In terms of facilities

Criteria	Group 1	Group 2	Group 3
2.1. Number of EE-serving equipment pieces	72% of units having under 10 pieces	17% of units having 10 to 20 pieces	11% of units having over 20 pieces
2.2. Number of EE-serving vehicles	57% of units having no vehicles	37% of units having 1 vehicle	6% of units having 2 vehicles
2.3. Number of EE-serving specialized meters	43% of units having no meters	40% of units having under 10 meters	17% of units having over 10 meters

## ❖ In terms of personnel

Criteria	Group 1	Group 2	Group 3
3.1. Number of trained energy technicians	26% of units having no technicians	66% of units having 1 to 5 technicians	8% of units having over 5 technicians
3.2. Number of CEAs	20% of units having no CEAs	77% of units having 1 to 5 CEAs	3% of units having over 5 CEAs
3.3. Average number of years of experience of CEAs	26% of units having no experience	34% of units having 1 to 5 years of experience	40% of units having over 5 years of experience

# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)



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## ❖ In terms of experience in energy efficiency

Criteria	Group 1	Group 2	Group 3
4.1. Number of energy conservation communication programs in the last 5 years	26% of units having no programs	54% of units having 1 to 10 programs	20% of units having over 20 programs
4.2. Number of EE training sessions in the last 5 years	57% of units having no sessions	34% of units having 1 to 5 sessions	9% of units having over 5 sessions
4.3. Number of EE consultancy projects in the last 5 years	40% of units having no projects	40% of units having 1 to 20 projects	20% of units having over 20 projects
4.4. Number of EE projects implemented directly for the private sector (not under the tasks or projects of the state and donors) in the last 5 years	52% of units having no projects	34% of units having 1 to 20 projects	14% of units having over 20 projects
4.5. Number of energy audit projects in the last 5 years	40% of units having no projects	43% of units having 1 to 20 projects	17% of units having over 20 projects
4.6. Number of consulted energy conservation solutions actually implemented by project owners	37% of units having no solutions	57% of units having 1 to 50 solutions	6% of units having over 50 solutions
4.7. Number of ESCO projects implemented	88% of units having no projects	6% of units having 1 to 10 projects	6% of units having over 10 projects



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# SURVEY RESULTS OF LOCAL POWER COMPANIES (PC)

❖ In terms of budget allocation for energy efficiency

Criteria	Group 1	Group 2	Group 3
5.1. Proportion of the budget spent on EE in the unit's total annual operating budget	29% of units with 0%	37% of units with under 20%	34% of units with over 20%
5.2. Local and central budgets	34% of units with 0%	29% of units with under 50%	37% of units with 50-100%
5.3. Other sources	77% of units with 0%	20% of units with under 50%	3% of units with 50%
5.4. Proportion of budget spent on EE equipment procurement/total operating budget	63% of units with 0%	28% of units with under 10%	9% of units with over 10%



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## DIFFICULTIES AND CHALLENGES FACED BY CENTERS IN ENERGY EFFICIENCY ACTIVITIES

- ❖ Some provinces develop their industries on a small scale, so it is difficult to access enterprises, and funding sources for energy efficiency have not been approved. (Lam Dong, Hoa Binh);
- ❖ Professional training on energy efficiency and beneficiaries are not fully aware of the importance of energy efficiency;
- ❖ Experienced human resources are limited, and there is a lack of EE-serving equipment;
- ❖ Difficulties remain in quality monitoring and assurance of energy audit reports among localities;
- ❖ The coordination in inspection by local state management agencies is still limited;
- ❖ No energy conservation programs/projects are applicable to small and medium enterprises yet;
- ❖ The legal system related to energy audit and energy management system development has shortcomings in monitoring and managing report quality;
- ❖ Enterprises get confused when they are not fully aware of energy audit;
- ❖ Difficulties remain in promoting the application of energy conservation solutions as units sometimes hesitate to include the solutions in their energy audit reports.



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## EVALUATION

- ✓ Most of the centers have departments/divisions in charge and full-time staff for energy efficiency,
- ✓ Specialized equipment, facilities and meters for energy efficiency activities in the centers are limited in quantity and type,
- ✓ The number of trained energy auditors in the centers is still limited,
- ✓ Most of the energy efficiency activities of the centers are financed by the state budget or sponsorship; revenue from enterprise consulting activities still accounts for a low proportion,
- ✓ Investments in energy efficiency by the centers are almost unavailable.



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# RECOMMENDATIONS

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- ✓ Develop training programs to improve capacity of the units' energy efficiency staff through training courses for energy auditors and managers; carry out advanced training on energy efficiency project management and development, etc.
- ✓ Gradually support local industrial promotion/energy conservation centers to equip themselves with specialized meters for energy efficiency consultancy,
- ✓ Increase the proportion of budget allocated from the VNEEP3 Program to localities for the promotion of local energy efficiency activities,
- ✓ Support connection and cooperation, experience exchange and capacity building on energy efficiency between domestic and foreign units.



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