Step 4 Participatory Energy Market Mapping (PEMM)

This step describes the process at the heart of the roadmap. It involves organising a series of flexible events to bring together the diverse group of market actors you've already identified in Step 2. These events provide the spaces to facilitate the actors to map out their market system and identify the market barriers and opportunities and to begin to coordinate and collaborate around agreed targeted interventions to overcome them. These interactions start the process of building trust and partnerships.

Contents

‘Market actors work together to map and understand their energy system and agree future actions’

Introduction

Step 4 of the roadmap describes how to carry out Participatory Market Mapping of the selected energy system, which is achieved through facilitating one or more meetings and workshops with a diverse group of market actors to map and analyse their system together, through a participatory process. The main objectives of these events are as follows, to:

- Increase the understanding of the market actors about how their system works
- Facilitate the start of dialogue between them, establishing a platform on which future coordination and collaboration can take place
- Collectively identify and agree on the main barriers and opportunities that exist within their energy market system
- Collectively agree on potential targeted interventions for overcoming them

The process: Building trust between market actors requires frequent and well-facilitated interactions. This is because it often takes time and requires patience for changes to take place in the way the market actors do business with each other, as facilitated by the roadmap process, which results in the tangible and measurable improvements in the selected energy market system.

The events: The process is best facilitated as a series of participatory events with the range of identified market actors – this includes the main participatory market mapping workshops with representatives from all market system actors, as well as facilitated one-to-one meetings between certain actors, MOG meetings, round tables, business fairs, etc., each building on the outcomes of the last.

Number of events: There are no set guidelines on how many and what types of events are required, as this depends on how willing the market actors are to start working together to map their market, identify the main barriers and opportunities, and then identify and deliver the activities required for overcoming them as best they can, to allow the energy market system to develop and grow. It is however likely that more than one event will be required.

Financial and social impacts: It is also important to note that although these events should be focused on the business aspects related to the development of the selected energy market, they also need to include the social, institutional and political issues, including gender equality. This may slow the process, but addressing these issues is often just as important for the development of the energy market system to achieve effective and sustainable impacts, in particular

addressing poverty and marginalisation.

Note: Step 4 of the roadmap builds on the preliminary mapping and analysis carried out in Step 2, but critically involves the facilitation of the market actors to carry out the mapping and analysis themselves so they start to take ownership of the process.

Step 4.1 Participatory process overview

The first objective of any participatory energy market mapping (PEMM) event is to provide a space for market actors to meet and start working together. These events will gradually start strengthening their relationships, building their desire to work together more in the future, and eventually building their trust and collaborations.

These events should start with the collective mapping of their energy system by all the market actors, to help them better understand their interdependency and the economic opportunities that exist from greater cooperation between them. Typically no single actor understands their system in its entirety, as each actor has a different perspective shaped by his or her particular place and role in it. Participatory events bring together as many actors as possible to allow them to each contribute their own perspectives and share their knowledge, to build a detailed map of the entire energy market system that they all agree on. This forms a visual representation of the shared understanding among them about how their system really works as well as a framework for further analysis and collaboration.

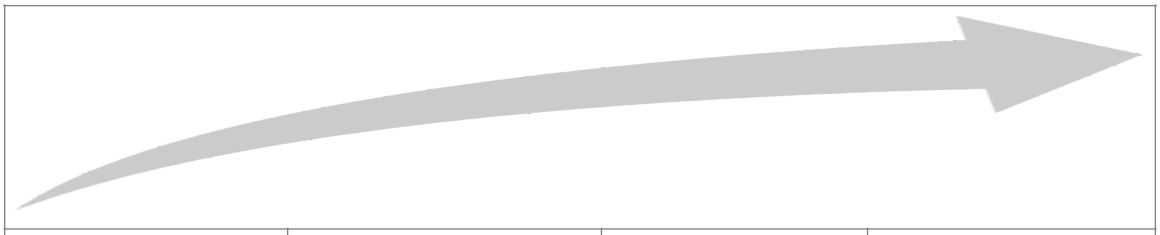
Participatory market mapping events can also help market facilitators continue to learn about the selected energy system, to improve their ability to facilitate the process. The preliminary market mapping and planning carried out in Step 2 can help the facilitators plan the series of participatory events, but care needs to be taken to ensure it is only used for planning and the market actors lead the process during the events.

Top Tip: The participatory events are most effective when they are planned flexibly as the roadmap process evolves, including the objectives for the workshops, the list of participants, possible delivery partners and detailed logistics based on the response of market actors towards past workshops, other activities of the roadmap process and prevailing market conditions. Participatory market mapping is a journey that facilitates a diverse group of market actors from individualist isolated behaviour to new cooperative and collaborative ways of doing business with a range of other actors resulting in win-win synergies.

4.1.1 - Participatory process milestones

Experience highlights that there are 4 main milestones on the participatory process, which are useful for the purposes of planning, preparation and facilitation of the workshops, as summarised in Figure 1.

Figure 1: Recurrent milestones in participatory market mapping



Milestone 1:	Milestone 2:	Milestone 3:	Milestone 4:
Market actors start understanding their system	Market actors frame their problems in terms of blockages and opportunities in the system as a whole	Market actors forge common interests and converge on a shared vision of the system	Market actors plan and undertake coordinated action to overcome market barriers

Milestone 1: Initially most market actors are unlikely to think of their market as a 'system' of many interconnected levels containing a range of other actors. Most have a narrow perspective of the particular roles and activities they undertake to derive value. By facilitating a diverse set of market actors to map out their system using the Market Map framework, they start to undergo a fundamental change of attitude reaching an agreement on how their market operates and how different actors interact with each other, as summarised below.

Individualistic view of market	→	Shared understanding of the market as a system

Milestone 2: Although the market actors understand their own problems better than anyone else, they typically see them in isolation, often blaming others for their struggles. The second milestone is reached when market actors start to identify and understand not just their own problems but those affecting other actors, and start to recognise them as interconnected parts of systemic blockages. Market actors shift from blaming each other and framing problems in terms of culprits and victims, to thinking in terms of conflicting but often valid needs and interests of different market actors, as summarised below.

Individual problems and blame	→	Viewing problems as part of systemic blockages

Milestone 3: Once the market actors begin identifying the blockages in their system, they often start forging common interests and converging on shared solutions. Actors often start 'crowding' around actions they can implement together when they realise they cannot overcome them by themselves. Often these

solutions result in a shared vision of how the market system could be different, working better for all actors. This typically coincides with a noticeable increase in transparency between the actors as they feel they're contributing towards common efforts to address issues, as summarised below.

Many blockages and no common direction		Common interests and shared vision

Milestone 4: The final milestone of the participatory market mapping journey occurs when the market actors prioritise and commit themselves to implemented agreed actions, often in coordination with other actors, as summarised below.

Brainstorm of ideas for solutions		Clear coordinated plans of action

Step 4.2 Roles of the facilitator

In most cases participatory market mapping is a temporary and catalytic process. By the end of the roadmap process these facilitated events should have been replaced by more permanent, actor-led spaces for their continued coordination and cooperation. Whether this happens or not depends on the value the market actors feel they derive from the events, which in turn depends on how well they are facilitated. Experience has shown that the role the facilitators play in these participatory events is critical to the success of the process, in particular in the following 4 main areas highlighted in Figure 2, below.

Figure 2: Roles of the facilitator in participatory market mapping

Creating the space • Convene market actors • Interpret positions • Democratise the space	**Managing the energy** • Manage expectations • Celebrate small achievements • Realise potential
Facilitator roles during participatory market mapping	
Channel the process • Monitor progress • Plan strategic exercises • Respond flexibly	**Moderate conflicts** • Mediate tempers • Uncover interests • Encourage constructive dialogue

Step 4.2.1 - Creating the space

The first role of the facilitators is to bring the market actors together and create a space where they can effectively interact and discuss their market system, carrying out the following:

Convene market actors: Facilitators need to bring together all the required market actors, including the marginalised and women, and ensure they have a productive and valuable workshop session so they are encouraged to attend subsequent workshops. The interest and demand among market actors for further events will depend a lot on the progress made of the previous events, as well as the 'hooks' and effective communication of the value of future events to the actors.

Encourage sharing: At the first event it is common for market actors to be quite reserved in the way that they talk to each other, not revealing their real needs and interests and instead making statements designed to protect their existing positions. Facilitators need to help the market actors feel safe and trusting so they can open up, revealing information about their market operations for the benefit

of others.

Democratise the space: Market actors have different levels of confidence and enjoy different positions of power within the market system. Facilitators have a critical role in creating the space for the market actors to interact in a democratic way, so they all have the same opportunities to have their concerns and interests discussed. This is particularly important for ensuring gender equality and representation of the marginalised. Appropriate communication techniques need to be used, which are sensitive to the levels of education, cultural background and disabilities, as follows:

- **Know the participants:** Carry out quick checks of the event attendees to ensure the communication methods cater to the languages the participants are most comfortable working in, their level of education (literacy and numeracy skills) and if any of them have disabilities (physical, mental, psychological).
- **Avoid jargon:** Although the roadmap uses some technical terms, when facilitating the workshop, make sure the language is appropriate to the participants, avoiding jargon and complicated terms.
- **Be creative:** Speaking and writing are only two forms of communication, so use other media, such as pictures, photos and role play to facilitate communication within the actors, as well as developing the market mapping framework.

Step 4.2.2 - Manage the flow

The second role of the facilitator is to carefully manage the flow between the market actors to encourage a positive, pro-active mentality and a tangible commitment to take action, as follows:

Manage expectations: Especially at the beginning of the process, market actors may have unrealistic expectations about what is involved, in particular that they can benefit from the process without having to pro-actively engage, such as receiving grants or subsidies. Even when they understand the process, they may have unrealistic expectations about how quickly they will benefit. The facilitator needs to carefully manage the expectations of the market actors so that they understand the value of the process, but realise it will take time and work.

Celebrate small achievements: As progress can be slow leading to low motivation and interest from some market actors, facilitators need to identify and help the actors celebrate small achievements. This helps build their belief that the process will provide real and lasting benefits for them all if they continue to commit.

Realise potential: As the interactions between the market actors increase, leading to increased levels of trust, facilitators need to help the market actors convert this into concrete commitments to action plans to overcome the energy system

barriers.

Step 4.2.3 - Guiding the process

The third role of facilitators is to guide the participatory market mapping process in the direction of its objectives, as follows:

Monitor progress: Information about how the events are progressing is very important in helping the facilitators plan subsequent events. This is so that they build on any momentum, learn from mistakes and strategically steer the process towards tangible market development impacts. The outcomes of each workshop, verbal reports on other complementary activities being facilitated, and new knowledge about changing market conditions are all critical areas facilitators need to be actively monitoring.

Plan strategic exercises: Exercises during events can be useful tools for increasing interaction between market actors in targeted ways. Facilitators need to carefully plan well-chosen exercises that can generate constructive dialogue appropriate to the particular participatory event milestone, such as increasing input from women actors.

Respond flexibly: There is a very important balance between planning strategically and responding to opportunities. Facilitators need to steer the participatory process following a carefully planned structure, but allowing some flexibility in the event timetable to respond to the interests and concerns of the market actors as they emerge.

Step 4.2.4 - Moderating conflict

The fourth role of the facilitators is to moderate conflict and where possible diffuse existing tensions between market actors, as follows:

Mediate tempers: When some market actors are brought together within participatory events they may end up conflicting with each other if underlying feelings of resentment and blame are released. The facilitators need to be aware of these potential conflicts and mediate as required, such as addressing the tempers of actors on particular issues. This helps draw out information about the market barriers, including an understanding of how the market actors can better overcome them by working together, through win-win opportunities rather than working against each other.

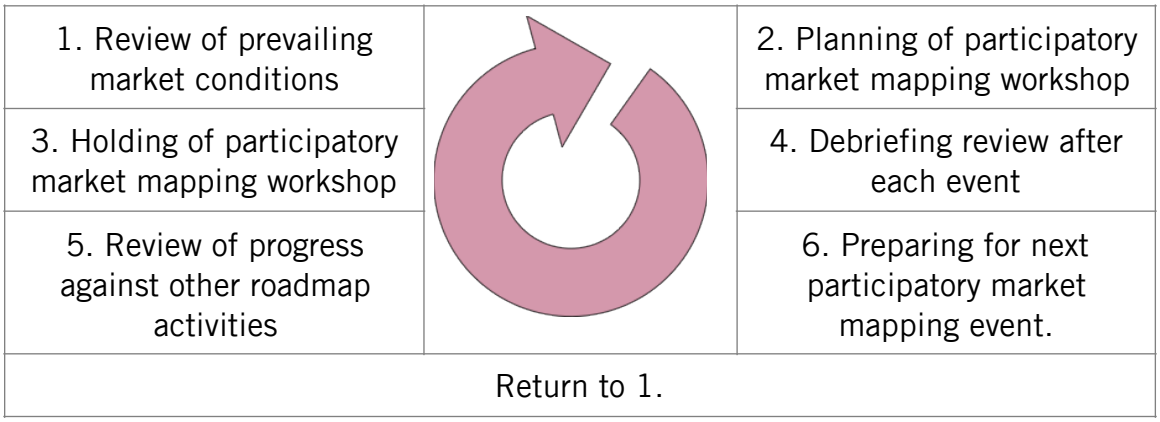
Uncover interests: In conflicts and arguments market actors tend to stand by their positions, based on their fundamental needs and core interests. Facilitators need to help market actors uncover each other's underlying interests so that they can be discussed and common ground can be identified for market actors to work together more productively in the future.

Encourage constructive dialogue: When facilitators are faced with conflict, they need to be able to react on their feet responding sensitively to the unique circumstances they face. Facilitators need to be able to stabilise high-tension situations by encouraging market actors to engage in constructive dialogue on potential solutions rather than pointless venting of emotions.

Step 4.3 PEMM event planning

Experience of has shown that although some aspects of PEMM events need to be carefully planned in advance, such as the quantity and frequency of events for budgeting purposes, each individual event is most effective when it is planned flexibly, with each event building on what has already happened in a circular process. Each event needs to be designed strategically to build on previous achievements, and attempting to tackle a number of key objectives, including its participants list, possible delivery partners and facilitation exercises, in an iterative process, as summarised in Figure 3, with each iteration being used as the starting point for the next event.

Figure 3: Iterative process of participatory market mapping



Step 4.3.1 - Participatory event objectives

The facilitation team should plan a series of events, including the main participatory market mapping workshop, in addition to several other events before or afterwards, using the template in **Annex 1**. It is important to list each event, considering the emerging issues in the system of the selected energy market that are creating new challenges and opportunities for the market actors. Based on these issues, the facilitation team should try and plan the objectives of each event, including what change is hoped to be achieved, for whom, and how. This can include building of capacity of certain actors to more confidently share their experiences, or facilitating all the actors to map their market system together identifying market barriers and potential interventions.

Top Tip: It is important that although the facilitation team tries to plan a number of events in advance, including their objectives, that they also remain flexible and change the events and their objectives over time as they gain important information about the barriers and opportunities of the selected energy market system from other events. It is also useful to have a plan for a range of events which can be explained to the market actors so they know what to expect on their

shared journey towards increased cooperation and collaboration.

Step 4.3.2 - Participatory event review

It is best to carry out the review of each event as a debriefing session as soon after the event as possible, while the facilitators have the details fresh in their minds, keeping track of the following items:

- Did the event achieve its outcomes against its objectives?
- What went well in the workshop and should be built on?
- What didn't go as planned, and what can be learned from this experience?
- Did anything particularly surprising or unexpected happen?
- Is there anything that facilitators should specifically look out for in the next workshop relating to these surprises?
- How did the market actors behave and what were their impressions about the success of the event?
- Did the event achieve its objectives, and if so, in what ways?

The overall roadmap process often involves a number of different activities happening at the same time, so it is important to also review what else has been happening between the market actors and how this information can feed into the participatory events.

Step 4.4 PEMM event preparation

After you've developed a plan for all your participatory events, including when they're going to be, you then need to start organising and facilitating each one. Well in advance of each event the facilitation team should work through the template in **Annex 2** to list each activity that needs to be carried out ahead of time to ensure the range of market actors can be effectively facilitated on the day, ensuring gender equality and sufficient marginalised actor representation.

Step 4.4.1 - Participant invitation

When it is time to organise the first facilitation event, to ensure that they manage to attract all the important market actors, the facilitation team should complete the template in **Annex 3**, listing all the marginalised and key market actors who were identified as either being highly relevant to the functioning of the market system, or have a high degree of power or influence to bring about change in the market system, or both. Ensure a good representation of women.

Depending on the specific objectives of the event, the facilitators may decide that not all the original actors need to participate, or that it makes more strategic sense to invite additional stakeholders that were not originally considered. In this way the list of ideal participants of participatory market mapping events needs to grow and shrink flexibly, to suit the objectives of each event and new knowledge as it emerges.

Once a full list of the market actors the facilitator wishes to invite has been developed, they then need to develop the hooks for each one, and send them an invitation well ahead of time. They can adapt the letter template provided in **Annex 4**, but making sure to address the following:

- Design the invitations to attract each actor, personalised if possible using the incentives you've already identified
- Use an interesting and exciting title
- Identify a location and host that will attract people
- Choose a date most people can attend with enough notice
- Use a suitable communication method - a formal letter, an informal email or a personal phone call as required
- Invite key actors to give presentations on topics relevant to them as a way of attracting them

Step 4.4.2 - Event organisation

It may be desirable to seek partners to help prepare and facilitate the workshops to better achieve the workshop objectives. This may be if the market actors are

more likely to attend because of the partner, or if they can help fund the event.

> **Note:** In later workshops, when market actors are used to the process and have already developed some degree of trust in each other, the facilitators should strive to pass on some of the preparation and facilitation activities to certain market actors. This will help build the ability of the market actors to organise, convene and facilitate multi-stakeholder coordination meetings themselves in the future, and is an important process of the facilitators planned exit.

Based on the event planning, some of these preparatory activities may be co-facilitated by selected market actors or other workshop partners, so it is important contact these potential partners to bring them on board.

- Appoint influential event conveners, facilitators and chairs if required and contact them in advance to bring them on board
- Be aware of cultural or gender issues to ensure the marginalised can also attend, and have access to the facilities they need if they do attend (e.g. toilets, prayer rooms, suitable food, translators etc.)
- Setting an appropriate length of time for the workshop based on participants' availability
- Source and prepare any resources and equipment ready
- Ensure that the event space has all the required equipment and can be laid out to allow the facilitators to work effectively
- Deal with any other logistical issues as required
- Choose a set of appropriate exercises to help steer the event and achieve the planned for objectives. In the hands of skilled facilitator, exercises can be powerful tools in helping channel the activities of the market actors, building trust and collaborative action.

Step 4.5 Running PEMM events

PEMM events are a mechanism for a wide range of market actors to carry out participatory analysis and assessment of their energy system through facilitated dialogue, trust building and collaboration. The key outputs are a robust market map with identified market system barriers of the selected energy system, and an action plan for the agreed activities for overcoming them, which serves as a joint plan among the actors on how to develop their own market. The map and action plan also helps external development agencies to define ways they can deliver their programmes of support to particular energy market systems, ideally acting as market facilitators.

Step 4.5.1 - PEMM workshop design

When designing a PEMM workshop it is wise to think through the materials required and the size and layout of the room.

Event layout: To effectively facilitate a group of market actors to interact, mapping their market system through a facilitated process requires floor space for people to move and form circles and groups, as well as wall space for the maps, as well as lots of post-its/coloured cards, pins/blue tack/masking tape and marker pens. It is important to provide seating and some tables for people to write on, but there needs to be space for people to move their chairs to form groups where they can discuss and make their maps against a wall.

Translating: The event may need to be organised in more than 1 language, with translators as required. It should be remembered that more time is required when undertaking direct translations, which interrupt the flow of ideas and conversations, adding length to each session, and working in one common language is always the easiest option if possible. However, this must be balanced with the need to ensure that everyone is participating, and translation can be a game changer for ensuring the most marginalised actors are involved!

Agenda: It is important to develop an agenda for the event, and the template in **Annex 5** can be adapted as required, ideally checking it with others beforehand.

> **Note:** It is also important to remember that a PEMM event is not just a way of identifying future interventions and gaining buy-in, it is also **an intervention in its own right**, as it actively increases the flow of information and understanding between the market actors, as well as improving relationships and cooperation between them.

Step 4.5.2 - PEMM event introductions

It is important to start the day with a round of introductions so everyone knows whom everyone else is, and ideally have name tags so people can continue to get

to know each other throughout the day - without the embarrassment of forgetting someone's name!

> **Note:** It is important for the facilitator, from the very beginning, to establish a fun and relaxed space where everyone feels free and comfortable to speak their mind. They should explain the key activities clearly, but keeping their voice and explanations to a minimum, and trying to get the market actors themselves to do the talking as much as possible.

Expectations: The facilitators can start by asking the participants to write down why they decided to come to the workshop and what they expect from the day, to start to understand their expectations. They can solicit responses from a few people, before moving on to an explanation about the objectives of the PEMM workshop.

Objectives: PEMM events utilise the energy market system framework to map the market and jointly assess its blockages and opportunities, and jointly agree strategies and actions to improve how the market functions via the participation of a wide variety of market system actors. A number of sub-objectives can be discussed with the participants to allow them to start to increase their understanding of the process, such as follows:

- To increase access to information and understanding of the market, as well as improving relationships and cooperation between market actors
- To understand the market's complexity, the critical structures, actors, relationships forces and drivers of change
- To develop a vision of market growth (and sustainability) and consider a broader range of responses
- To decide how to facilitate market system change together

Keep it simple: It is important for the facilitators to keep the use of complicated terminology and jargon to a minimum and use a very simplified version of the mapping framework during the introduction. They need to try to elicit questions and comments from the participants to ensure they understand what is being explained, although they will continue to learn more throughout the day. It is useful to make it clear that the workshop is simply an opportunity for market actors to discuss and assess problems and identify solutions within their energy market system, with everyone being together as equals and have equal opportunities to speak.

Experience has shown that the introduction session should be kept to a bare minimum as the participants often respond well to moving quickly into the market game activity, which is an ice-breaker, and helps them start to get to know each other but to more quickly understand the basic objective of the workshop.

Note: It is important to start to manage expectations of the participants from the start, by being explicit about what is being offered and what is expected from the participants. It is important to be clear about whether funding is or isn't available for future events and to support interventions.

Step 4.5.3 - Energy market system game

After the introduction it is helpful to carry out a markets system game to help the participants better understand the range of market actors that exist in an energy market, and the difference between the 3 levels, and how a market really works and how relationships between market actors can be strengthened in an interactive way.

Randomly assign each participant a role of a market actor in an example energy system, written on a piece of card - ideally this role should not be their real role so they start to understand an energy market system from the perspective of another actor! It is important to prepare these cards beforehand so you have a mix of market actors in each of the 3 levels ensuring you have at least 1 card for each participant.

Ask each participant to give some thought to the following:

- What their role in the market entails
- What value their role brings to the market
- What relationships with other market actors their role depends on

Then ask all the participants to introduce themselves to everyone else whilst acting out their new role, and trying to find other actors they might need to work closely with. After this, using masking tape, mark out the 3 levels of the energy market system on the floor (energy market chain; services, inputs and finance; enabling environment) and ask each participant to place him or herself where they think their role should sit within the system. This may take some time, as people talk to each other, make mistakes and get directed somewhere else – don't worry as this interaction is very important!

When everyone has finally decided, ask each actor, starting from one end of the energy market chain to explain their new role, including what value they think they add and to highlight any difficulties or challenges they think they might face. Then move to each actor in the input, services and finance level, explaining how they assist each market chain actor to work effectively, and finally each actor in the enabling environment level, describing the impact they have on various market actors. During this process, allow other participants to make comments, correcting when required, or even disagreeing. If the actor is in the wrong place, the facilitator can get the others to correct the position, explaining why they think so.

Although this game can take quite a lot of time, particularly if translations are required, it is very important in getting all participants to be involved, to start to think about how a market system operates, and to understand the interconnections between each market actor in each of the 3 levels. If you have a very large group you can restrict the active participants to around 20, with the others taking the role of observers, but it is better if everyone is involved as much as possible.

After the game it is useful to review what happened, asking the participants about the key things they learned from the game, what surprised them, and which roles they thought were most important, and could change or impact the system as a whole. It is important to help the participants understand the interconnected and complex nature of the system. It is useful to end the session with a review of the basic components of an energy market system, using the example from the game.

Step 4.5.4 - Participatory energy market mapping (PEMM)

The facilitator should explain that participatory energy market mapping is used to enable market actors to better understand all the aspects and parts of their own energy market systems. It allows the market actors to better understand who the other actors are, to see the different roles they and other play, and the value they add, and to better understand the parts of the system they might feel disconnected from. It also allows them to identify the blockages and opportunities in their energy market that are impacting them, and potentially others.

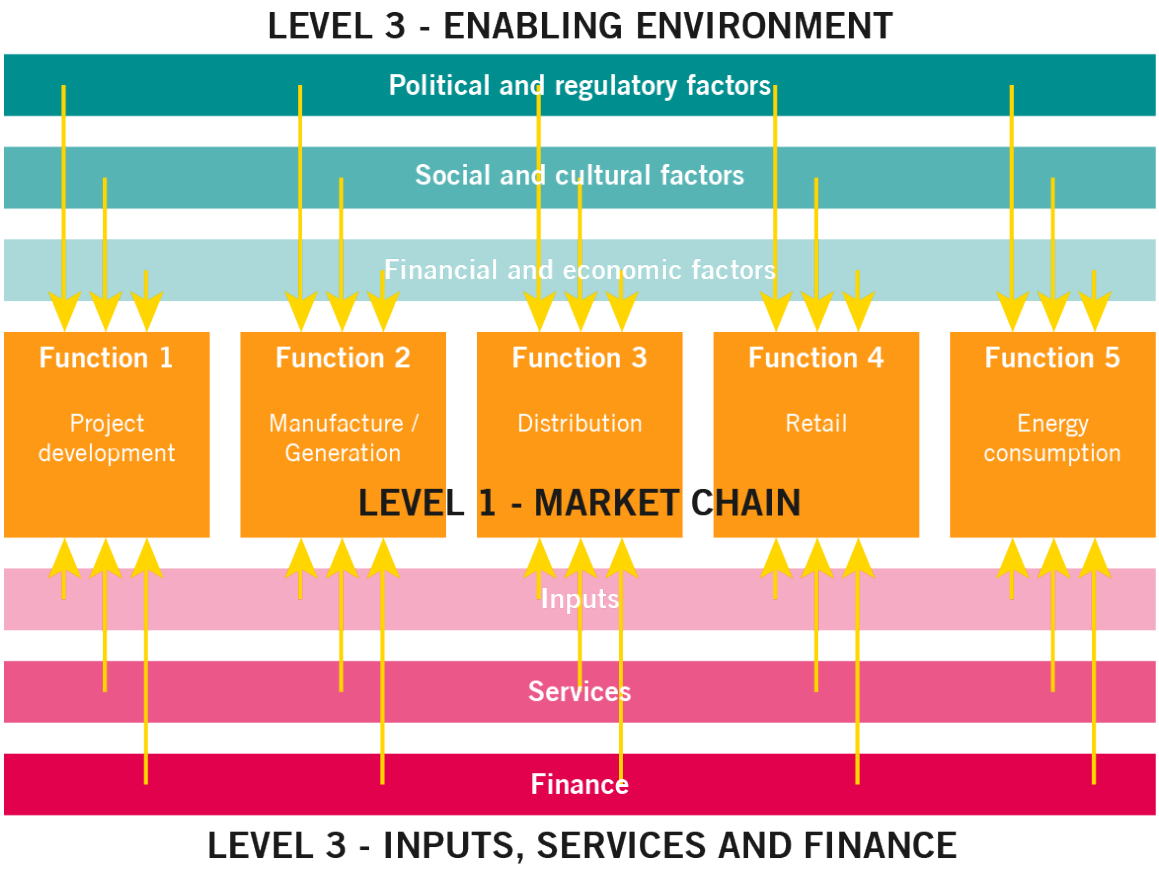
It is critical to again stress that all participants need to speak as equals in order to find solutions together, through open dialogue, establishing connections and building trust. To help each participants understand the underlying concepts of market mapping it is useful to provide a hand-out to each attendee, which they can refer to, as outlined in the template in **Annex 6**.

If the group is large, it may be better to split the participants into 2 or 3 groups of 10-15, and to facilitate each group to map their energy market system with a neutral co-facilitator, ensuring a dynamic interaction of all participants. It is important to plan the groups, ensuring each has a mix of actors from different backgrounds and market systems levels, and a good gender balance.

> **Note:** It is important for the workshop to be technology neutral so as not to alienate any particular actors and to ensure unbiased facilitation of the event – the aim is not to decide which energy technology is better than another, but to identify the barriers that impact all actors.

Each facilitator needs to set up each group in a big semi-circle in front of a large blank board, giving them cards, post its and marker pens, and prompt them to start mapping out their energy market system, identifying all the market actors and how they interact with each other, in the 3 levels, as summarised in Figure 4.

Figure 4: Simplified summary of an Energy Market System including the 3 main levels



The facilitators' role is to retain the interest of the group, mitigating any conflicts in the discussions and to promote collective thinking. This requires leading the group in a systematic manner but also allowing free-thinking and vibrant discussions to take place. A balance is needed between encouraging interaction and positive engagement between the actors – even disagreements – as well as gradually working through each part of the system, and each identified issue in a more directive manner. The facilitator needs to put forward ideas and potential solutions if required, or the discussions go off-track, and helping identify and address incorrect or incomplete ideas.

The facilitator can start by splitting the blank canvas into the three layers of the market system and began mapping each level, in whichever order the participants prefer, using different coloured post-it notes for each one, highlighting the difference between the identified market actors and the issues facing them, using a key to explain the difference.

Level 1: Market chain: When preparing the market chain - in the middle of the map – to identify the actors who own the energy product and move it from primary producer to final consumer, it is useful for the participants to think about each

function, from manufacture, distribution, retail and consumption, grouping each actor accordingly. It is then useful to support the participants to assess each function against the following 3 criteria, which need to be functioning well for the overall market to operate effectively and efficiently.

- **Number** of actors that in each stage of delivery (current and potential) as well as the geographic distribution of the actors. Explain that a larger number of well-connected actors lead to greater competition and more effective and efficient delivery.
- **Performance** of the organisations (how well they operate and how well developed their business models are), as well as the performance of the products. Explain that well performing actors and products assures effective and efficient delivery.
- **Relationships** between different actors, including the level of connection, coordination and competition between actors along each level and between levels. Explain that there are likely to be higher levels of trust between well-connected and coordinated actors and consequently more effective and efficient delivery.

Level 2: Inputs, services and finance: When detailing the critical inputs, services and finance that the market chain actors need to effectively deliver their role (for example ensuring the quality of their solar PV lanterns), it is useful for the participants to identify each one separately. They can use different coloured post-it notes for type, which are required by each market chain actor to support them to effectively and efficiently deliver the products as they pass along the market chain. It is often easier to identify the type of service and then the actors who is, or might, be able to deliver it, as follows:

- **Inputs** are the wide range of physical resources that each chain actor needs to be able to access to effectively and sustainably deliver their products to the next market actor in the chain
- **Services** are needed by each chain actor to better produce, distribute and sell their energy products such as product design, market research and quality control and product testing procedures. These are provided by organisations, such as private sector companies, government departments and community-based organisations
- **Finance** includes financial services that support each market chain actor to produce the products to a high quality and deliver them; and the financial services required by end users to purchase them. These can include loans and equity for the market chain actors and small loans for the end users

Level 3: Enabling environment factors: It is often easier to identify these factors, which influence each of the other market actors last, including formal (e.g.

policies and regulations), informal (cultural norms), and infrastructure (e.g. roads, telecommunications networks) factors. Again, it is often easier to identify the factors first, and then the actors who are responsible for them.

Final output: The final output should be a detailed map of the energy market defining all the market chain actors and key linkages in all of the 3 levels, from the point of view of the actors themselves, as well as identified barriers and opportunities, and potential leverage points and solutions for overcoming them.

> **Note:** The map is a simplified model to help the market actors understand their complex system, it cannot show every nuance and relationship, and doesn't have to be perfect, at least during the first event. It should provide a useful baseline framework for the market actors to continue to develop further in the future, through working together promoting dialogue, collaboration and improve understanding.

Step 4.5.5 - Participatory market analysis

Once a final map of the selected energy market system has been agreed upon, the facilitator needs to help the participants develop a joint vision of what a more functional energy market system in the future should look like, including viable strategies and activities to achieve that vision. This involves undertaking participatory analysis to identify the market barriers and potential opportunities and their leverage points.

> **Note:** Often any one actor working in isolation cannot remove a market barrier. Instead they need to be addressed through the coordinated and collaborative action of several market actors, which is an important point for the market actors to understand.

Market analysis: The facilitator should ask the participants to review and analyse their map, focusing on the system as a whole and where the leverage points are that will enable it to function more efficiently, inclusively and profitably, resulting in the maximum impact for the minimum effort. Participants should use additional coloured post-it notes to identify the systemic market barriers to be addressed in the future, including how this might affect the roles of the actors and their relationships with each other.

Gallery walk: Once each group has finished, its useful to carry out a gallery walk, where members of each group review the other groups map, in particular the potential market barriers, asking any questions and clarifications as required. This should result in a validated and boosted market map, with additional details on the market actors vision for their system, and how the market actors can start to work together to address the existing market barriers they've identified.

Actors discussions: During the market analysis the facilitator needs to continually encourage the discussion between the actors, in particular from the marginalised

actors. This needs to include a joint understanding of how the system operates and their roles, as this is often the most important output for the next steps of the roadmap. The facilitator needs to encourage the contribution and commitment from each actor, in particular ensuring gender equality, to retain their interest throughout the mapping and into the shared vision for overcoming the market barriers collectively.

Step 4.5.6 - Joint action planning

The last part of the workshop needs to move from analysis to action. The facilitators need to encourage the participants to tease out potentially viable solutions for overcoming the market barriers, and to design their own joint action plan with the potential to move them from where they are now to their desired vision. This is critical in ensuring the ownership of the action plan by the market actors, capturing their specific interests and talents, and allowing them to determine which actions to prioritise.

Barriers and opportunities: The facilitators need to encourage the participants to focus on the barriers and opportunities for fulfilling their market vision, by writing down the 5 most important blockages and 5 most important opportunities on a coloured post-it note. Each participant then needs to cluster them on a large board, ideally giving each cluster a focus and a title. This clustering should ideally be carried out by one of the market actors, with support from the facilitator.

Importance ranking: Once the main groups of barriers and opportunities have been identified, it is useful to try and analyse the root cause of each, and how each can be overcome, building consensus in the group. It is then useful to rank the importance of each. After ranking some ideas can be easily discounted as acting on them would either be too difficult, too risky or too expensive. The remaining ideas can be prioritised, with a number of them being identified to be taken forward by the group.

Future plans: The facilitators should encourage the participants to identify win–win solutions and strategies and outline an action plan for overcoming each of the prioritised market barriers and interventions. The facilitator should then ask each participant to identify up to 3 activities they would most like to work on. If time permits the facilitator should support the participants to create a strategy for each intervention, including its desired outcomes, required actions and delivery dates, which can then be taken forward in future participatory events, as agreed solutions with clear commitments and deadlines.

Interest forums: It is the facilitator's role to inspire the participants to not only commit to these actions plans, but also form groups of market actors, as interest forums where they can start meeting, networking and further building trust, coordinating and collaborating to ensure the deliver of each agreed intervention. Encouraging and supporting such collaborative working will better ensure that the

agreed interventions build on the existing capacities and capabilities of the involved market actors.

Step 4.5.7 - PEMM wrap up

Progress: It is important for the facilitator to bring together everything that was discussed during the day, from the mapping to the identification of the market barriers and potential interventions for overcoming them, and agreed actions to be taken forward by the interest groups. It is important to highlight that the success of the workshop ultimately depends upon the future engagement and commitment of the participants, but that has already started. The process of the market actors coming together in the workshop, starting to get to know each other and to start to find their own ways to unlock their own energy market and start doing more and better business together in the future, with greater involvement of marginalised actors, and greater gender equality.

Next Steps: It is useful for the facilitator to be explicit about what the next steps are, and if funding is available for future events and to fund potential interventions. It is also important to reiterate that it is in the interests of the participants to own their own action plans and to support the development of their own market system. Other development agencies may also be able to support the agreed action plans with resources (funds, labour, materials, etc.), including the use of targeted subsidies at critical moments when market actors may be unwilling to experiment with new ways of doing things (e.g. using new techniques, technologies or business models).

Event Output: It is important to explain that each participant will receive the written outputs of the PEMM workshop including the market map, and intervention matrix, capturing the market system from the point of view of all actors, including the market barriers and potential interventions for overcoming them. **Annex 7** provides the outputs from a PEMM workshop carried out in Rwanda on the ICS sector, which can be adapted by the facilitator for their events.

Step 4.5.8 - Forum facilitation

The success of a PEMM workshop depends upon appropriate facilitation to ensure the active engagement of all market actors, to put forward ideas and solutions and present obstacles as opportunities. A set of facilitator notes is provided in **Annex 8** to give some guidance to the facilitators of future PEMM workshops. Overall the group facilitator's role is to:

- Encourage commitment to contributing to solutions and striking deals
- Ensure openness to all the ideas proposed
- Remind the actors of their vision for their market

- Promote viable strategies and activities to achieve that vision
- Encourage 'side deals' to take place between market actors
- Support the development of interest groups to take forward each action plan, obtaining local funding, or funding the activities themselves, if possible

Step 4.5.9 - Participant feedback

At the end of the workshop it is important to elicit feedback from the participants to try and understand how they benefitted from the workshop and how future workshops could be improved, with an example participant feedback form given in **Annex 9**.

Experience has shown that participants find the events to be useful in making new connections, especially within the Government, and starting to build new relationships. The workshops also raise awareness among the actors about the operation of their market system and the pivotal role each actor plays, in particular the importance of involving marginalised actors, and gender equality.

If facilitated well, the participants will feel free to interact with each other in a neutral space, with all actors represented and actively involved. Participants often feel that the PEMM process helped open their minds, seeing their own potential to start doing things on their own rather than waiting for external organisations to solve their market's problems, although most participants request additional follow-up events to be organised if possible.

Step 4.6 Events follow-up

It is important for the facilitation team to review what happened in the workshop and to plan a range of follow up events, including additional workshops and meetings as required, and resources permit. It may be that the outcomes of the PEMM workshop can be used to source funding from donors to support the prioritised activity plans.

It is important to follow up with the participants to find out the following:

- The extent to which they changed what they do because of the event
- The extent to which they returned to their communities to communicate the discussions and commitments made in the PEMM event
- The extent to which they continue to interact with other participants, in particular the interest groups started to be formed during the events

Momentum: It is important for the facilitation team to build on the momentum of the events as soon afterwards as possible, to promote the development of the energy interest forums and follow up the commitments made by the market actors.

Next events: It is important to try and ensure continuity, although it may be premature to expect working groups to move forward alone in the short term without any additional facilitation and support. If possible subsequent smaller events should be organised to identify the support and resources required to move each activity plan forward with each interest forum.

Progress reporting: If possible it is important to bring the participants and cluster groups back together to report back to the broader forum on changes that have occurred and any interventions that have been developed and implemented to overcome the identified energy market system barriers.

Annex 1 Template for planning participatory market mapping events

Event number	Type of event (workshop, meeting, forum etc.)	Aimed for objectives of event	Summary of learning from event
Event 1		Objective 1: Objective 2: Objective 3:	Learning 1: Learning 2: Learning 3:
Event 2		Objective 1: Objective 2: Objective 3:	Learning 1: Learning 2: Learning 3:
Event 3		Objective 1: Objective 2: Objective 3:	Learning 1: Learning 2: Learning 3:

Annex 2 Template for workshop preparation activities

Workshop preparation activities	Primary responsibility for delivery	Delivery support	Deadline for activity
Activity 1: Review of prevailing market conditions and previous events			
Activity 2: Defining objectives of event			
Activity 3: Developing list of participants			
Activity 4: Identification of event preparation team and facilitators			
Activity 5: Outline of planned event exercises			
Activity 6:			

Annex 3 Template for workshop list of attendees

No	Sector / Organisation	Type of organisation and role
LEVEL 1 Organisations		
Energy product and service manufacturers, importers, distributers, retailers		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
LEVEL 2 Organisations		
Energy product and service input, services and finance companies		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

LEVEL 3 Organisations		
Enabling environment organisations and end users		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Facilitation team		
1		
2		
3		

Annex 4 Template for workshop letter of invitation

[Insert Organisation Logo and Stamp]

[Insert Date]

Dear [Insert name]

Title: [e.g. Increasing access to electricity mini-grids in Kenya]

Date:
Venue:
Time:

[Insert Invitee] would like to invite you to attend [Insert description of the event and reasons for holding event].

Given your strategic role in the [Insert selected energy market] and your vast experience, [Insert invitee] cordially invites you to attend a one day Participatory Energy Market Mapping (PEMM) workshop for stakeholders to help transform the market system, improving it for all involved market actors.

The objective is to jointly map the market system of [Insert selected energy market] and to assess the blockages and opportunities that exist, as well as agree on strategies and actions to improve how that market functions via the participation of a wide variety of market system actors.

This PEMM workshop will bring together key actors and stakeholders to analyse the market and decide how to facilitate market system change together**.** It is a mechanism for participatory analysis and assessment that involves exploring the broader market picture and learning about how the market works. It is an opportunity for market actors and policy-makers to develop a vision of market growth (and sustainability) and assess problems and identify solutions together.

We look forward to your participation and would be grateful if you could confirm your attendance by the [Insert Date]

Tel:
E-mail:

Yours sincerely,
[Insert Signature and Organisation]

Annex 5 Template for key actors and systemic issues

Key actors	What are the systemic **blockages** that affect them or that involve them?	What are the systemic **opportunities** that affect them or that involve them?	What are the systemic **risks** that affect them or that involve them?
Key actor 1			
Key actor 2			
Key actor 3			
Key actor 4			
Key actor 5			

Annex 6 Template for workshop participants hand-out notes

MAPPING THE MARKET: An energy market is mapped as 3 layers of the market system:

Level 1: Energy market chain actors: the people own the product and move it from primary manufacturer or importer to final consumer

Level 2: Energy inputs, services and finance: the critical inputs, services and advice that the market chain actors need to play their role in the market system for example with quality, finance or transport

Level 3: Enabling environment factors: the policy and regulatory factors, the social and cultural factors, and the financial and economic factors (people's ability to pay and credit access)

ENERGY MARKET CHAIN: When assessing the energy market chain think about the various functions each market actor delivers (manufacture, distribution, retail and consumption), assessing each function against the following criteria, which need to be operating well for the overall market to operate effectively and efficiently:

Number of actors that in each stage of delivery (current and potential) as well as the geographic distribution of the actors. A larger number of well-connected actors leads to greater competition and more effective and efficient delivery.

Performance of the organisations (how well they operate and how well developed are their business models), as well as the performance of the products. Well performing actors and products assures effective and efficient delivery.

Relationships between different actors (level of connection, coordination and competition between actors within each stage and between stages. There is likely to be a higher level of trust between well-connected and coordinated actors and consequently effective and efficient delivery.

Indicator	Manufacture	Distribution	Retail	Consumption
Number of actors that in each stage of delivery (current and potential) as well as the geographic distribution of the actors Indicate the type and number of actors in each stage and comment on how well or poorly they are inter connected				

Performance of the organisations (how well they operate and how well developed are their business models), as well as the performance of the products. Please comment on the performance of the actors in each stage and the performance of their products				
Relationships between different actors (level of connection, coordination and competition between actors within each stage and between stages. Please comment on the connectedness and coordination and levels of trust between actors in this stage				

ENERGY INPUTS, SERVICES and FINANCE: Identify the inputs, services and finance that are required by each market chain actor to support them to effectively and efficiently deliver the products as they pass along the market chain.

Inputs are the wide range of physical resources that each chain actor needs to be able to access to effectively and sustainably deliver their products to the next market actor in the chain. This might include biomass fuels, required labour and materials (clay, metal), workshop facilities/equipment/tools/moulds, boards and templates, storage space.

Services are needed by each chain actor to better produce, distribute and sell their stoves such as product design, market research and quality control and product testing procedures. These are provided by organisations, such as private sector companies, government departments and community-based organisations. This might include testing facilities, technical expertise in kiln construction/ operation, production training and improved production processes, promotion and marketing of fuels and stoves, metal work skills, carbon credits, access to relevant technology, business skills (planning/book keeping/marketing), stove installation, production of moulds.

Finance includes services that support the chain actors to produce the stoves to a high quality and deliver them; and the financial services required by end users to purchase them. These can include loans and equity for the market chain actors and small loans for the end users.

ENERGY ENABLING ENVIRONMENT FACTORS: Identify the diverse set of factors or forces that shape how the chain and support market operates. It is useful to assess how easily and cheaply these factors can be overcome. This includes the specific policies and regulations that are required, including standards and permits/licensing, as well as cultural issues relating to new technologies and ability of the end users to pay for the services, including level of awareness. It is important to be aware that some factors are beyond the control of the actors (and are not included in the map) such as macroeconomics and global market trends, social and cultural norms, infrastructure, environmental factors plus laws and contractual enforcement. The following table can be used to identify and assess each factors, with some examples given:

Factors	Analysed issue
Political and regulatory	e.g. Regulation of fuel use, implementation of standards for stove production, specific regulation on stove production and use, cooperation/networking between institutions, research and development
Social and cultural	e.g. Indoor Air Pollution (IAP), cooking habits.
Economic	e.g. Taxation on imported solar PV lanterns, carbon financing

Annex 7 Template for identifying hooks for key actors

Hook issues	Relevant information	Reasoning
Hook content		
Opportunities to communicate hook		
Other contact methods		
Hook communicator		
Hook recipient		
Other pressure points		

Annex 8 References

UNIDO - Pro-Poor Value Chain Development includes a tool to investigate how the value chain affects poor people in the value chain (pg 35-37), and also discusses the impact of gender-based constraints (pg 39)

The Pathways Out Of Poverty toolkit provides a more robust tool for bringing the poorest actors to a point of empowerment, from page 5 onwards.

Grameen Shakti's DRAFT Value Chain Identification for the poorest Toolkit provides further guidance on selecting value chains that have the maximum potential to engage and positively impact very poor populations.

Annex 9 Example of workshop feedback form

Energy market mapping workshop participant feedback form

Practical Action has organised this workshop to improve our shared understanding of the market, and identify constraints and opportunities for market growth using participatory exercises. Learning as we go is important to the work of Practical Action and other development partners. Please give your frank insights and constructive criticism to help us improve and ensure we can deliver value in this field. If you do not wish to give your name or your organisation's name that is fine. If you want to, particularly if you have a question that requires an answer, then be assured that your comments will not be attributed to you and any summary of feedback received will be entirely anonymous.

Date:

Is your organisation:

( ) a commercial company, ( ) a non-profit organisation, ( ) a government agency, ( ) a multi or bi-lateral agency, or ( ) other _____?

Please indicate on a scale from 1 to 4 how you would rate the usefulness of this workshop for your day-to-day work

1: not useful 2: somewhat useful 3: useful 4: very useful

What was your motivation to attend the workshop?

What was good or went well?

What was not good, could be done better, or should be improved for another similar workshop?

Please mention one thing that you have learnt today?

Can you identify one thing that you plan to do, or plan to do differently, following today's workshop?

What would you have liked to have been included in this workshop that was not?

What further support, if any, would like to see from [Insert Host] in the future? How do you think [Insert Host] could best facilitate improved partnerships in this area?

If another workshop was to be organised by [Insert Host], what would you like it to focus on?

Please add any other comments you may have

Optional Contact Details

Name: Email: Telephone:

Annex 10 References and further reading

Jorg Meyer-Stamer and Colin Mitchell of Mesopartner discuss why the management of expectations in development activities so often goes wrong: http://www.mesopartner.com/nc/ledcast/podcast- blog/article/tools-7-managing-expectations/

Figure 1 summarises examples of exercises that you can use to facilitate market actors to reach each milestone. You'll find full descriptions of these exercises in the Supplementary Guidance Note: Exercises for participatory market mapping workshops.

Figure 1 Using carefully chosen exercises to reach each milestone