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DAC Approach on supporting developing countries' net-zero aligned energy transitions

Executive summary

Through the DAC Declaration on Paris Alignment (OECD, 2021[1]), DAC members committed to aligning their ODA with the goals of the Paris Agreement. Members committed to prioritising support to technologies focused on accelerating progress towards net zero systems, in particular renewable energy and energy efficiency, and ending new ODA for unabated international thermal coal power generation by the end of 2021. This collective commitment (i) recognises the vital role of international financing, policy alignment and country-led initiatives in advancing energy transitions that integrate climate action into broader development goals and (ii) called for the development of an approach to transitioning ODA investments towards net-zero.

In response to this pledge, the DAC developed a framework - hereafter referred to as the "DAC Approach" - to provide high-level guidance on supporting net-zero aligned energy transitions in partner countries. Grounded in inclusive dialogue, this approach seeks to integrate support to energy transitions within the economic, environmental and social contexts of developing countries, while fostering international partnerships and leveraging finance. The approach highlights and systematises current practices, facilitate their recognition and serves as a model for further co-operation in the sector. It is organised under five pillars that cover i) integration, ii) delivery, iii) energy objectives, iv) mobilisation and v) partnerships. The DAC Approach focuses in particular on the sector of energy supply and access, due to its centrality in each energy transition process, but also recognises that actions in other areas such as demand side interventions and activities outside the energy sector are equally fundamental elements of a country-wide transition towards net-zero.

The Five Pillars of the DAC Approach

1. Integrating net-zero aligned energy transition support into the development process

Support to net-zero aligned energy transitions to be embedded within overall sustainable development processes to ensure coherence and long-term impact. The DAC Approach emphasises:

- **Approaching the energy transition as an integral part of the development process.** Linking energy and development plans: energy transition strategies are to be aligned with national economic, social and environmental goals to create cohesive action plans.
- **Backing and reinforcing energy transition leadership at centres of government.** DAC members support leadership at governments' centers, enabling coordination across ministries and sectors while prioritising net-zero transitions.
- **Connecting the energy transition to key country systems and processes.** Integrating energy into economic systems: the DAC Approach incorporates energy planning into key financial and governance frameworks, such as fiscal policies and national budgets, ensuring transitions are feasible and sustainable.

2. *Enabling ambitious partner country action on their own net-zero aligned energy transitions*

The DAC prioritises enabling partner countries to take ownership of their energy transitions. Key aspects include:

- **Enabling developing countries to build their own energy transition process.** Partner countries lead the design and implementation of their energy transition strategies, with donors aligning their support accordingly.
- **Aligning long-term, coordinated support around implementation of the country plan.** The DAC Approach prioritises sustained, collaborative support for developing countries' net-zero energy transitions by aligning with national strategies, fostering coherence among donors and integrating these efforts into broader development frameworks.
- **Promoting policy and regulatory frameworks that enable net-zero aligned energy transitions.** Support focuses on creating robust policy environments that facilitate renewable energy adoption, energy efficiency and private sector engagement.
- **Resourcing key capacity for catalytic action.** Investments in institutional and technical capacity ensure countries can develop, implement and manage energy projects efficiently, from planning through execution.

3. *Covering core energy objectives of access, affordability, poverty, efficiency and security*

The DAC Approach centers on addressing interrelated energy challenges critical to development:

- **Addressing energy access, energy affordability and energy poverty as central elements of energy interventions in developing countries.** Support to energy interventions prioritises expanding access to reliable, affordable and clean energy for underserved populations, emphasising solutions like mini-grids and clean cooking technologies.
- **Promoting renewable energy sources and energy efficiency as key areas for energy transitions.** Members promote renewable energy sources and energy efficiency as core components of sustainable transitions, integrating financial mechanisms to support these efforts and supporting energy utilities and energy enterprises in their investments.
- **Exploiting the potential for energy security and net-zero aligned energy transitions to mutually reinforce each other.** The approach highlights the dual benefits of diversifying energy sources to improve system reliability, while mitigating price volatility and geopolitical risks associated with fossil fuels.

4. *Designing energy transition support to unlock commercial capital*

Meeting energy transition goals requires a transformative shift in financing. The DAC Approach incentivises the use of ODA as a catalytic instruments to mobilise private finance investments:

- **Targeting mobilisation to the specific country and commercial contexts.** DAC members aim to mobilise private capital by leveraging public funds strategically, addressing risks and reducing barriers for investors specific for each partner country, taking into account the specificities of each country including institutional, political, economical, regulatory, social, environmental aspects.
- **Contributing to local financial systems development for clean energy investment and financing.** The DAC Approach recognises that strengthening local financial systems is key to enabling clean energy investments, improving access to climate finance and reducing the cost of capital for renewable energy projects.
- **Aligning incentive structures in development finance delivery with unlocking commercial capital at scale.** Development finance institutions are encouraged to adopt frameworks that incentivise private sector engagement, particularly in high-impact projects such as renewable power generation and grid modernisation.

5. *Leveraging partnership to accelerate energy transitions*

Partnerships form the backbone of effective energy transitions. The DAC Approach promotes co- operation across countries, development institutions and the private sector, including through peer- learning and triangular co-operation.

- **Building delivery partnerships around country net-zero aligned transition strategies and plans.** DAC members support multi-stakeholder partnerships, such as Just Energy Transition Partnerships (JETPs), to bring together governments, private entities and civil society around national transition plans.
- **Enabling strengthened partnership and peer learning among international and local institutions and networks.** Regional and international collaboration facilitates knowledge exchange, enabling countries to adapt best practices and technologies to local contexts.
- **Pooling and connecting efforts beyond the country level to achieve critical mass for progress.** The DAC Approach promotes efforts to harmonise energy markets across regions as these can enhance efficiency, lower costs and support higher integration of renewable energy sources.

Introduction

The DAC Declaration commitment to support developing countries' net-zero aligned energy transitions

Members of the OECD Development Assistance Committee (DAC) have committed to supporting developing countries' transition to net zero greenhouse gas (GHG) emissions, as stated in the 2021 DAC Declaration on a new approach to align development co-operation with the goals of the Paris Agreement on climate change (henceforth 'DAC Declaration on Paris Alignment') (OECD, 2021[1]). The DAC Declaration notes that to achieve the Sustainable Development Goals (SDGs) and the goals of the Paris Agreement, developing countries must have inclusive economic development, and for that, rising energy demands must be met in the most sustainable way. Additionally, access to energy must increase. In the context of the support to net-zero transition, the DAC Declaration emphasises that both energy and energy transitions are key for development; and that DAC members need to promote both to deliver on their development mandates.

The DAC specifically commits to developing an approach to transitioning ODA investments towards net zero, taking into account developing countries' needs and commitments made under Nationally Determined Contributions (NDCs) and in line with the global temperature goals and best available science. Importantly, the DAC Declaration on Paris Alignment acknowledges that in combination with partner country investments, Official Development Assistance (ODA) has an important role to play in helping partner countries shift their policies, regulations and laws in support of mitigation. It further underscores the need to direct international financing to low GHG emissions alternatives and reiterates its commitment to implement Article 2.1c of the Paris Agreement and made the same commitments as the G7 on ending ODA support for unabated international thermal coal power generation. The DAC Declaration includes also strong commitments on adaptation, including to increasing support by scaling up finance for adaptation, which are however not specifically covered in this note.

Process: From analysis and dialogue to a DAC Approach

Building on reference work on energy transition needs and pathways notably from IEA and IRENA, and with a view to supporting members to act on the commitment of developing a DAC Approach to support developing countries in their energy transitions the Secretariat has developed the DAC Approach outlined in this note. This has been done in close coordination with the work developed under the DAC Working Party on Development Finance Statistics (WP-STAT) on tracking DAC Members' support for sustainable energy transitions (DCD/DAC/STAT(2022)36).

The DAC Approach presented in this note has been developed on the basis of the policy dialogue and analytical work carried out in 2023, including a series of three workshops held in Q1 and Q2 2023 to help prepare the analytical elements of the DAC Approach as set out in DCD/DAC/ENV(2023)6 and discussed at the 27th ENVIRONET plenary meeting on 4 October 2023 (DCD/DAC/ENV/A(2023)2). The DAC Approach reflects member requests to focus on supporting the energy sector as a central part of the net-zero aligned energy transition, while recognising that economy wide transition towards net-zero requires action in many more sectors.

The DAC Approach does not establish new commitments or recommendations, but rather translates existing agreed language, commitments and practices into a coherent format. The DAC Approach is therefore intended as a reference for the collective work of DAC members, to ease communication, policy dialogue and inspire future development co-operation action. The approach is based on extensive research, peer exchange and analysis and represents a statement of a common position of DAC members, rather than a policy or research paper. DAC members can use it as a reference and tool in relation to their own efforts to support net-zero aligned energy transitions, to coherently communicate their collective actions and to inspire further support on this topic.

DAC Approach on supporting developing countries' net-zero aligned energy transitions

The DAC Approach is rooted in the specific commitments, statements and spirit of the DAC Declaration. It brings these commitments together with the modalities of support that members have been already implementing in the field; and it reshapes them under five broad pillars, which systematise the existing characteristics and long-term perspective of the DAC support. Its objective is promoting a coherent support to partner countries in their net-zero aligned energy transitions, as an integral part of their development process and objectives.

This approach reflects the basic purpose and intention of development co-operation to enable and advance sustainable development in and by partner countries. The DAC Approach outlines how DAC members make a positive contribution to support developing country-led energy transitions. It focuses on practical aspects for more effective support, building on ownership, country processes, and strengthened capacities – and the practical reality that development co-operation is a partnership – and that its quality is decisive in defining the effectiveness, impact and sustainability of development co-operation. It takes account of the necessity to unlock additional financing and to use available finance in the most efficient and catalytic way possible. The DAC Approach also has been developed mindful of the diversity of both developing countries (with a broad diversity of starting positions to energy transitions, e.g. being energy importers or exporters, focusing on universal access or industrial development, etc.) and development co-operation providers (with different mandates, priorities, operating models and contexts).

The DAC Approach focuses on the energy supply and demand sectors, and in particular electricity production and use, while acknowledging that net-zero aligned energy transitions include also action in all sectors (e.g. agriculture, livestock, forestry, transport, construction and the environment in general). However, within the overall transition to climate-resilient, net-zero development pathways, the net-zero aligned energy transition is the keystone dimension. Energy is a mainstay in development co-operation, also reflected in the range of providers supporting different energy sub-sectors for several decades (DCD/DAC/ENV(2023)6). Without a coherent approach that can promote different providers and activities to act on the basis of a common policy stance, this support risks being inconsistent and incoherent, potentially undermining or slowing down both the net-zero aligned energy transition and the broader development progress. A common approach, built around supporting developing countries be successful in transitioning their energy systems; and it has the potential for synergies and efficiencies that enhance impact, keep transaction costs low and avoid mixed and confusing signals to developing countries, but rather reassure and enable them in going forward with ambitious action.

The DAC Approach reflects four characteristics of the broader Paris Alignment of (i) contributing positively to the transition to sustainable development pathways, (ii) focusing on catalysing countries' transition to climate-resilient, net-zero development pathways, (iii) supporting the climate processes under the Paris Agreement, (iv) while integrating them within the overall development process, as well as responding to evolving evidence, knowledge, and opportunities. The document has been organised along five pillars of: i) integration, ii) delivery, iii) energy objectives, iv) mobilisation and v) partnership, in line with the Outcome Document of the DAC High-Level Roundtable at COP28¹.

Next step: DAC endorsement

To fulfil the DAC Declaration pledge to develop a new approach, the DAC Approach on support to net-zero aligned energy transitions needs to be endorsed by DAC members.

To recall that the DAC Approach highlights both the areas of action and the guiding principles that are already put in practice by DAC members, in particular by those with a particular focus on providing support in the areas of climate change and energy.

The DAC Approach also aims also to provide inspiration, and guidance, for the whole DAC community; and it seeks to act as a broad tool for clearly communicating the actions that are being supported, as well as the reasoning behind the modalities chosen to support to net-zero aligned energy transition, promoting awareness of the developmental benefits of the energy transition and of the interlinkages between climate and development action.

Looking ahead, the DAC Approach aims to be used as a reference in the work with the partner countries supported; and its guiding principles inspire new co-operation activities between partner countries and development institutions.

With its adoption, the DAC signals the continued support in the area of energy transition and the synergies and co-benefits with the broader development and poverty reduction agendas.

¹ See: <https://www.oecd.org/dac/development-assistance-committee/COP28-roundtable-climate-action.pdf>

PILLAR 1: INTEGRATION

Integrating net-zero aligned energy transition support into the development process

• Approach the energy transition as an integral part of the development process
• Backing and reinforcing energy transition leadership at centres of government
• Connecting the energy transition to key country systems and processes

Energy and energy transitions objectives cannot be disassociated from overall sustainable development plans, considering the tight interlinkages between economic, environmental and social dimensions. This linkage is the starting point for approaching energy transitions and is essential for coherence, consistency and effectiveness in efforts to support partner countries.

1.1. Approach the energy transition as an integral part of the development process.

Under the DAC Approach, support is provided to facilitate the integration of net-zero aligned energy transition within the overall development process of partner countries.

Developing countries' approaches and actions define how the energy transition is shaped and advanced at the country level. At the same time, the energy transition has direct implications for developing countries' broader economic and development outcomes. Situating the energy transition within a country's overall sustainable development and economic context reflects the basic reality that energy, energy transition and sustainable development processes are inherently linked and mutually dependent; and it acknowledges the practical necessity to treat them as such. Siloed approaches, such as supporting energy transitions activities that do not take into account the development and economic context, will almost invariably lead to inefficiency at best, and incoherence, conflicts, ineffectiveness and inability to deliver either set of objectives in most cases.

Under the DAC Approach, support for net-zero aligned energy transitions in developing countries is integrated into, and reflected by, overall strategy and policy for international development. All relevant departments, institutions and agencies within a DAC member engaged in formulating and delivering development co-operation base themselves on one overarching approach. In this regard, DAC Members ensure that international support for net-zero aligned energy transitions is based on the realities, needs and objectives of developing countries (OECD, 2022[2]). Additionally, coherence across different actors within donor systems is a condition for effectiveness and impact of international support. It is essential that different channels, instruments and levers of international support – policy support, capacity building, funding and financing – as well as action across different sectors and policy areas relevant to energy transitions, complement each other to ensure greatest impact and benefit in developing countries.

Under the DAC Approach, providing energy transition support through the international system and multilateral channels promotes the integration of climate action into overall support for sustainable development. For many DAC members, the international system is the main channel of delivery for their support to net-zero aligned energy transitions [DCD/DAC/ENV(2022)9]; the largest share of development finance for climate action is provided through multilateral institutions, while bilateral contributions by DAC Members play a critical role in enabling this action. DAC members actively engage in, and

provide support to and through, the international system to promote the integration of energy transition objectives and needs within multilateral institutions and the support these institutions provide to developing countries. DAC donors do so to maximise the impact of international action as a whole, based on complementarity, respective roles and comparative advantages of its different parts and institutions.

1.2. Backing and reinforcing energy transition leadership at centres of government

Under the DAC Approach, donors ensure appropriate focus on supporting leadership and capacity for net-zero aligned energy transition at centres of government. Centres of government determine the authorising and enabling environment, for action by government and society as a whole, including locally driven action, by public authorities, private enterprise as well as civil society. They have responsibility and oversight of apex intergovernmental co-ordination mechanisms; they play a primary role in carrying structural policy reforms; and they have the ability to pursue integration within and across ministries and sectors.

Integrating energy transition objectives and strategies in sectors beyond energy is critical. Emissions reductions in e.g., industry, transport and buildings – the most emission- intensive end-use sectors – are essential in reaching net zero (IEA, 2021[3]). Centres of government set the parameters that shape and guide policy approaches across sectors and provide for their collective coherence. Supporting the integration of net-zero aligned energy transitions into integrated planning and policy-making processes requires adequate capacities at various centres of government, including regional and local institutions. Given the persistent capacity gaps in developing countries, international support to resource these capacities is a key enabler for effective and country-owned action.

1.3. Connecting the energy transition to key country systems and processes

Under the DAC Approach, support to developing countries' net-zero aligned energy transitions reflects the necessity to integrate transition aspects into economic policy making and planning processes, as well as fiscal and public budget systems. Integrating energy transitions into the real economy and overall sustainable development process necessitates the consideration and reflection of their system-wide implications. Tax and budgetary systems define what is taxed; from which sources and activities revenue is generated; and how it is spent. They provide important incentives that can be decisive for the relative cost and profitability of different energy investments and choices for the energy system overall. On the expenditure side, funding decisions - including e.g. on subsidies - are the most direct way in which countries direct financial resources to policy objectives. Conversely, energy transition plans will, in practically all cases, have an effect on tax receipts and economic activity, which could be particularly challenging for fossil fuel producing developing countries. Ambitious action on the net-zero transition has consistently found to yield very substantial growth and development benefits over the medium and long term (OECD, 2017[4]). Failure to account for short-term growth, revenue or distributional impacts have the potential to trigger shocks that risk derailing both the energy transition and broader sustainable development in countries. Connecting transition efforts from the start to these key country systems is, therefore, a basic premise for its feasibility.

PILLAR 2: DELIVERY

Enabling ambitious partner country action on their own net-zero aligned energy transitions

• Enabling developing countries to build their own energy transition process
• Aligning long-term, coordinated support around implementation of the country plan
• Promoting policy and regulatory framework that enable net-zero aligned energy transitions
• Resourcing key capacity for catalytic action

Energy transitions are a multifaceted effort, requiring long-term planning as well as coherent and consistent implementation efforts across different sectors and policy areas, levels of government and a range of actors. The process is complex, involving the formulation of ambitious energy policy objectives, engagement with relevant stakeholders, adaptation of regulatory frameworks, identification and development of viable projects, acquisition of funding, project execution and ongoing adjustment to changes in energy demand, prices and external conditions. Energy transition plans are critical policy tools, providing an economy-wide multi-sectoral approach towards bridging energy access gaps while maximising energy transition opportunities.

Striking a balance between long-term goals and the day-to-day functioning of energy markets is essential to ensure the continuous delivery of energy services without disruptions. Effective planning for energy transitions extends beyond the production of strategies; it entails an ongoing process that encompasses political, institutional, financial, and executive dimensions, as well as active involvement from citizens and businesses. Energy transitions demand policy coherence, appropriate institutional frameworks and effective executive arrangements. Strong national ownership and leadership are crucial for steering complex, long-term processes needed for successful energy transitions, which can be reinforced by consistent development co-operation support from donor countries.

The availability of a country's energy transition plan, coupled with the institutional framework for its implementation, is pivotal in getting effective development co-operation support. Multilateral and bilateral partners can play a crucial role in mobilising support around clearly defined country priorities, which can then be translated into concrete, actionable steps and bankable projects capable of attracting both public and private partners. Development co-operation partners can help developing countries to plan and implement the needed shifts in a way that lays the groundwork for future-proof energy systems. Just, inclusive energy transitions can also help to foster greater public acceptance for climate change mitigation policies and enable more rapid progress.

2.1 Enabling developing countries to build their own energy transition process

Under the DAC Approach, support for the energy transition is focused on enabling developing countries to shape and advance their own net-zero transition. This involves a dual approach: a comprehensive long-term strategy coupled with concrete, short-term implementation plans that align closely with the objectives set in the Nationally Determined Contributions (NDCs). The presence of an integrated energy transition plan not only provides a clear roadmap but also has the potential to serve as a coordination tool for the stakeholders and actors, thereby fostering effective collaboration towards the common goal of net-zero emissions. Importantly, these strategies should seamlessly integrate into broader national development processes such as 5-year plans or national development strategies, ensuring coherence and effectiveness in policy and project cycles. Continued donor support remains pivotal in underpinning these efforts, reinforcing the commitment to sustainable development and climate resilience and to assure co-ordination in the support of the energy transition plan.

Under the DAC Approach, donors pay attention to supporting consensus building around integrated energy transition plans and pathways among relevant stakeholders. While commercial dynamics, in particular of renewable energy and energy efficiency, make a strong case for net-zero aligned energy transitions, the political, behavioural and economic complexity of energy system reform can work against these advancements. From the start, it is important to consider both elements of technical feasibility as well as ownership and political support, including by supporting consensus building on the structural transformation of the energy system, which might include politically and socially sensitive areas such as the transformation of publicly owned utilities or energy subsidies reforms. Careful attention to social aspects is fundamental to assure that the most fragile segments of the population benefit from the energy transition.

Under the DAC Approach, donors collectively ensure sustained, systematic support beyond the technical development and update of energy transition plans. Donors' support to energy planning is particularly important in countries with limited capacity and resources, and/or less developed energy systems. To be effective, the support to energy planning focuses on the overall reinforcement of the capacities of the national institutions that are responsible for energy development planning and implementation, rather than on external one-off support.

2.2 Aligning long-term, coordinated support around implementation of the country plan

Under the DAC Approach, support is structured around partner countries' net-zero aligned energy transition strategies, emphasising long-term commitment and support to their specific plans. Developing countries lead the formulation and execution of their energy transition agendas, with DAC members providing support tailored to these strategies, leveraging existing country systems and institutions. This coordinated approach ensures the effectiveness of development cooperation efforts by fostering coherence and consistency over time. Given the complexity and duration of successful energy transitions, sustained international support plays a crucial role. While challenges in predictability exist, collective efforts among DAC members and multilateral bodies aim to maintain a high degree of stable support through robust partnerships. Linking these efforts to national development or policy cycles, including allocations from Multilateral Development Banks (MDBs), further enhances their impact and sustainability.

Under the DAC Approach, members ensure co-ordination, complementarity and synergies across the various initiatives created to promote net-zero aligned energy transition. The energy transition is pivotal for sustainable development, especially for the least developed countries that cannot afford missteps in this critical area. Effective coordination among donors and harmonisation of their strategies are crucial to minimising transaction costs and preserving scarce capacity. DAC members reaffirm their adherence to development effectiveness principles and best practices. Ensuring consistency in messaging and approaches is paramount to maintaining momentum and avoiding setbacks, and thereby the contribution of net-zero energy transitions to broader development goals. Co-ordination and harmonisation are not limited to bilateral operations; DAC members contribute to many international initiatives that support energy transition objectives. In many cases these initiatives are joint ventures between partners, bilateral and multilateral as well as the private sector that too needs to be co-ordinated and oriented in support of the national energy transition plans.

2.3 Promoting policy and regulatory frameworks that enable net-zero aligned energy transitions

Under the DAC Approach, the promotion of robust and sound policy and regulatory frameworks are a key dimension of enabling ambitious energy transition plans. The regulatory framework of the energy sector can be extremely complex. Renewable energy and energy efficiency activities need specific regulations, technical standards, procurement modalities, network codes and consumer protection principles. Energy markets that align with net-zero targets need regulatory structures to allow, for example, the integration of high shares of intermittent renewable power and energy storage; the functioning of wholesale electricity markets; a large number of independent power producers; the presence of smart grid infrastructures; and the integration of demand side management. Technical standards are necessary across all aspects of energy infrastructure, including energy efficiency and environmental considerations. Private investments in the energy sector also require specific policies and regulations (see Pillar 4). In-country policy and regulatory instruments need to be designed to (i) incentivise sustainable energy production and consumption modalities to achieve rapid and robust progress on partner countries' energy transitions and development objectives; and (ii) de-incentivise technologies and production routes that are inconsistent with the achievement of partner countries' own transition strategies.

2.4 Resourcing key capacity for catalytic action

Under the DAC Approach, key in-country capacities are prioritised for enhanced, sustained resourcing. Many aspects of implementation of the energy transition are contingent on enhanced delivery capacity in partner countries. Building capacities is central to facilitating ambitious action towards net-zero aligned energy transitions; support partner country-owned and -driven enhancement of policy and regulatory frameworks for net-zero energy transitions; promoting peer learning among staff of energy ministries, utilities, energy companies and network operators. Additionally, supporting peer exchange and learning among countries that are facing similar challenges can also be a very effective to promote capacity and development of know-how (see Pillar 5).

Relevant capacities in central governments and ministries of energies, as well as network operators, electric utilities and other institutions often constitute a binding constraint and implement energy transitions. To promote a country-owned and driven transition, members support funding of enhanced basic capacity in terms of additional qualified staff in key places of developing country systems, in addition to ad hoc support such as embedding experts, financing sector studies for relevant institutions and delivering trainings.

Under the DAC Approach, targeted capacity support for project pipeline development and operation of energy systems is designed to overcome commercial bottlenecks and unlock additional investment. The dearth of pipelines of investable projects, especially in LDCs, for renewable power generation, energy efficiency and energy transmission and distribution has long been identified as a key constraint for more ambitious action on net-zero aligned energy transitions. In-country capacity to identify necessary investments, prepare project pipelines, raise necessary funds, access international finance and in particular climate finance, promote technology deployment is fundamental for the successful implementation of the energy transition. The presence of large anchor clients – which can be essential for the financial viability of new power generation development projects – are also linked to complex, multi-year contractual agreements which needs to be carefully crafted and regulated by the energy institutions. Similarly, for a sound investment environment for net-zero aligned energy transitions, for example, capacity for improved technical, financial and managerial operations of utilities are a key factor. These are instrumental to ensuring transparency and creditworthiness in utilities, which is vital for the energy system's development. While the role of electric utilities varies by region, their ability to operate transparently and sustainably is critical. Well-managed utilities should efficiently manage market operations procure wholesale electricity from IPPs, serve customers and secure funding for investments while repaying loans to investors, whether public or private. In this context, reinforcing the technical institutions of partner countries institutions, providing direct funding targeting technical assistance and local human resource development are key measures of support contributing to net-zero aligned energy transitions. Ultimately, both short-term re-training and skills acquisition as well as long-term investing in education, human capital and the evolving expertise of the workforce are key to both the design and the implementation of the energy transition. Moreover, they are central foundations for societies' and economies' ability to realise the opportunities of the economy and technologies of the future and for achieving sustainable economic growth and development more broadly.

PILLAR 3: ENERGY OBJECTIVES

Covering core energy objectives of access, affordability, poverty, efficiency and security

Addressing energy access, energy affordability and energy poverty as central elements of energy interventions in developing countries
Promoting renewable energy sources and energy efficiency as key areas for energy transitions
Exploiting the potential for energy security and net-zero aligned energy transitions to mutually reinforce each other

Energy access, affordability, poverty, efficiency and security are critical dimensions of the net-zero aligned energy transitions of developing countries; and they are interlinked and mutually reinforcing. SDG7 explicitly integrates objectives on energy access – which includes the affordability dimension - renewable energies (RE) and energy efficiency (EE). The DAC Declaration on Paris Alignment commits members to end new ODA for unabated international thermal coal power generation, while the COP28 outcome called on Parties to transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner.

Furthermore, energy security is a key economic as well as broader strategic priority and condition that needs to be integrated into net-zero aligned energy transitions, notably in terms of diversification of energy sources and of the supply chains.

Energy transition is not a priority only for countries with more developed energy infrastructure. Countries with limited energy access implement distributed energy systems based on renewable energies as a cost-effective method to allow communities to access modern energy services. Both developed and developing countries are deploying renewable energy to reduce production costs, diversify energy systems, enhance energy security and reduce environmental impact. Record-breaking new renewable power generation capacity was added in 2023 and 2024 (IEA, 2023, p. 18). Finally, energy efficiency improvements in both production and use enhance the technical and economic performance of energy systems, benefiting populations. Between 2000 and 2019, energy efficiency in emerging markets and developing economies increased at an average rate of 1.9%, slightly better than in developed economies (IEA, 2023, p. 21). A large bouquet of inter-related actions needs to be considered in addressing those interlinked energy objectives.

3.1 Addressing energy access, energy affordability and energy poverty as central elements of energy interventions in developing countries

Under the DAC Approach, addressing energy poverty is a primary concern. Energy poverty has various dimensions, which encompass not only the physical availability of modern energy services, but also their affordability, their reliability, their uses. The possibility to access modern energy services – including both electricity and clean cooking – is a necessary pre-condition for any social and economic development, including the whole 2030 Agenda; and it has a particularly important gender dimension. To enable the achievement of the COP28

outcome on tripling renewable energy capacity, it is essential to extend electricity systems resilience and flexibility, notably through increased deployment of storage systems, distributed energy resources and smart grids. Other actions include digitalised demand response, solar PV self-consumption, promotion of a proactive role of consumers and establishment of renewable energy communities.

Access to modern energy services can significantly enhance gender equality by alleviating the burden on women and girls who often procure domestic energy and suffer from indoor air pollution, as well as providing new employment possibilities and safer public spaces. Support in this area needs to be designed through a deep understanding of the local conditions, of the causes of energy poverty and by using the modalities that the persons with lower access levels utilise to satisfy their energy uses. This includes also supporting the implementation of national bioenergy strategies increasing the production and availability of modern bioenergy, as well as an approach to possible transition fuels in a way that is consistent with - and efficient in - achieving developing countries net-zero energy systems and modern domestic energy services.

Under the DAC Approach, comprehensive energy access interventions are favoured, including regulatory and policy dimensions, supply and demand side. Specific policies and regulations to facilitate energy access are promoted such as electrification planning, establishing legal frameworks for mini-grid and off-grid systems, supporting the development of independent distributed energy companies, developing affordable tariff schemes, support to development of clean cooking business ecosystem, setting of technical standards for electricity and clean cooking appliances. Demand-side interventions include designing financing mechanisms to support access to modern energy services for the poor, such as lifeline tariffs, public energy services, cross-subsidisation and schemes to reduce first connection costs. Supply-side interventions include infrastructural investments in the grid, particularly in expanding the last-mile distribution network and making sure electricity supply match demand. In rural areas they also include support to the development of renewable mini-grids through actions such as assessments and investigations, regulatory and construction permitting, technical standards compliance and business development. Members supports this wide range of actions through technical assistance, provision of development finance, co-financing of projects and sector policies and mobilisation of additional domestic and international sources of revenue.

3.2 Promoting renewable energy sources and energy efficiency as key areas for energy transitions

Under the DAC Approach, actions that promote energy efficiency and renewable energies are at the core of the support to net-zero aligned energy transition. At its core, energy transition is about making sustainable, efficient energy services available for all. In the electricity sector, whatever the structure of the market is (unbundled, centralised, or a combination of the two) the entities that produce the electricity - and the one that transmits it - must be in the condition of planning, developing and implementing renewable energies and energy efficiency activities. Utilities need to be in the condition to implement large investments, and to do the necessary changes – technical, but also in terms of institutional culture – to allow renewable energies to achieve their potential within each country. This means for example evolving business models, internal training to support and evolution from traditional business as usual power generation to an integrated framework focused on energy transition.

Under the DAC Approach, access to energy efficiency (EE) and renewable energy (RE) financing is facilitated. EE and RE have a different cost-structure than traditional fossil fuels projects. In the case of solar, wind and hydro projects, there is a large initial investment costs followed by minor maintenance costs during the life of the project. The economic feasibility of EE and RE projects depends heavily on the availability and cost of financing. DAC members support countries in increasing their options for financing EE and RE projects, including support to access climate finance from bilateral and multilateral institutions (including the Green Climate Fund GCF) and as well facilitate the liaison with other sources of capital, promotion of the private finance mobilised.

3.3 Exploiting the potential for energy security and net-zero aligned energy transitions to mutually reinforce each other

Under the DAC Approach, energy security concerns are embedded in their support to net-zero aligned energy transitions. Energy security is a multidimensional concept that touches on the ability of the energy system to continuously meet energy demand and ensure a stable provision of energy services at affordable prices, including when a large share of intermittent renewable energy sources are integrated in the system. Energy security is affected by a variety of factors, both local and international. Among the local factors: the availability of diversified energy resources, the possibility to access to energy technologies, the availability of local energy sources, the functioning of the energy infrastructure. Among the international factors: international fuel and energy prices and prices fluctuations, international energy trade dynamics and geopolitical dimensions.

Energy security can be affected in particular by fossil fuels price fluctuations which are most often caused by abrupt constraints in the supply chains (e.g. war or instability in some fossil fuel producing countries). Energy transition from imported fossil fuels to local renewable energies can strengthen energy independence and security.

The deployment of modern renewable energies also has energy security risks (e.g. concentration of raw materials and manufacturing capacity in few countries, the technological challenge in integrating high shares of intermittent renewable energy sources within a system, the implementation of flexible demand-side response mechanisms, etc.). In most cases, the energy security concerns on renewable energy or energy efficient projects are mostly addressed at the investment stage and do not typically affect the price of the energy generated in the lifetime of the infrastructure. Supporting net-zero aligned energy transitions includes integrating and leveraging the energy-security advantages linked to the diversification of energy sources to reinforce consensus towards energy transition. Energy security is a key aspect to highlight in communication with decision makers and with the public, emphasising the co-benefits in terms of price stability and affordability, as well as potentially limited exposure to international energy trade disruption risks.

PILLAR 4: MOBILISATION

Designing energy transition support to unlock commercial capital

Targeting mobilisation to specific country and commercial contexts
Contributing to local financial systems development for clean energy investment and financing
Aligning incentive structures in development finance delivery with unlocking commercial capital at scale

A decisive shift of energy investments in developing countries towards private sources is needed to achieve the global temperature goals and reignite progress on energy poverty reduction as well as sustainable development more broadly. Renewable power generation has the lowest levelised cost of electricity for new electricity generation capacity in an increasing number of developing countries. In some cases, the costs of building new renewable power generation capacity can be lower than continuing to operate existing coal plants (IEA, 2021[5]); (IRENA, 2022[6]). The high share of private capital in forecasts for renewable power-based generation also reflects the maturity of these technologies. Mobilisation of private investment, financed from private markets, is happening in a growing range of developing countries.

Renewable power generation is in principle highly investable for the private sector, while creating high economic and social value added. Maximising this investment potential is important for reasons of efficiency, not just for the energy transition, but for meeting countries' overall needs for financing sustainable development: where privately financed renewable energy provides cost-competitive power generation, it provides an essential input for sustainable development and growth without affecting fiscal space of developing countries. Rather, it generates wealth creation and jobs, that contribute themselves to the economy, as well as increased government revenue through taxation of profitable ventures. Scarcity of financial resources, limits to resource mobilisation capacity and cost of finance are a defining constraint faced by developing countries. The more it is possible to meet energy needs through privately financed investments, the more development finance resources will be available for other sustainable development and climate action priorities that require continued public funding and financing.

4.1 Targeting mobilisation to specific country and commercial contexts

Under the DAC Approach, financial efficiency in achieving energy transitions investments and targets drives the deployment of official development finance, in particular concessionality. To this end, mobilisation efforts need to be targeted to the commercial dynamics, geographic contexts and life cycle stage of energy transition projects. Carefully calibrating the use of development finance to mitigate risk, address market failures and support market development with minimum concessionality is essential for effective mobilisation and avoiding market distortion that can hold back the transition. Where purely commercial solar and onshore wind projects are not yet fully viable despite robust policy and regulatory frameworks (e.g. in many low-income countries), concessional development

finance has an important role to bridge viability gaps and in doing so make renewable energy projects in these economies more investable. To do so, DAC members deploy blending approaches and leveraging instruments based on specific investment risks, which can include country risks, commercial risks and financial risks.

Under the DAC Approach, a dynamic approach to mobilisation efforts reflects the rapidly changing technological and commercial specificities in the energy sector – both generation and end-use – to ensure the effective use of scarce development finance resources. Concessional development finance has a high opportunity cost given the significant needs for financing sustainable development. Where the commercial viability of investments is clear, development finance needs to take pro-active steps to make place for and crowd in financing from private sources, including transferring assets to private investors where and when possible. For example, for renewable power generation, the most significant risks are often limited to development and construction. Once projects are operating successfully and profitably, their risk profile changes significantly. This enhances scope for ownership transfer to private investors, thereby freeing up public finance to be redeployed to new development investments. It also allows directing more development finance support more to less mature technologies that play a critical role for the net-zero aligned energy transition, such as distributed generation with batteries or smart grid systems.

4.2 Contributing to local financial systems development for clean energy investment and financing

Under the DAC Approach, support to developing, deepening and greening the local financial systems is a key dimension for unlocking commercial capital for energy transitions at scale. In many developing countries, particularly such as LDCs and SIDS, weak local financial systems ability to mobilise, intermediate and allocate finance constitutes a defining constraint to sustainable development – and the basic reason, why official development finance exists. The more domestic financial systems develop, the deeper and liquid will become the pools of private capital of local capital and currency financing they can mobilise and intermediate, and with that, the lower the barriers to accessing international capital markets become, and the easier and cheaper it is to manage and arbitrage foreign exchange risks (OECD, 2022, p. 114[2]). Achieving sustainable development goes hand in hand with generating and intermediating increasing majorities of investment and financing through the domestic financial system. Policy and capacity development support for developing countries' financial systems and macro fundamentals, including the integration of sustainability and transition, is a key plank of the support to net-zero aligned energy transitions. These actions are a core part of driving down the cost of capital for sustainable energy projects in developing countries, which account for 80- 70% of excess capital cost compared to advanced economies (IEA, 2024[7]). They also have an essential role to match enhanced support for project pipelines of energy-transition projects with enhanced financing opportunities (see Pillar 2).

4.3 Aligning incentive structures in development finance delivery with unlocking commercial capital at scale

Under the DAC Approach, donors focus on the alignment of incentive structures with unlocking commercial capital for energy transitions in the international development finance architecture, as well as bilateral development finance institutions. Direct financing, in particular for sovereign lending, will continue to be a critical role for bilateral and multilateral development finance. Mobilisation of private finance and investments requires different internal systems and operational approaches, while safeguarding the sustainability as development banks and institutions that operate as financial institutions. Amid ongoing reform discussions and efforts, action in three areas is key for enabling more catalytic mobilisation impact: strengthened development bank and DFI mandates to deliver transformative climate action; clear, quantified mobilisation targets in place that consider development and financial additionality; and adjusted incentive structures to drive a stronger focus on mobilisation. The active engagement and support by shareholders and donors, including coordination across ministries and boards of governors, required for a step-change in unlocking commercial capital for energy transitions by these institutions, forms an important part of the approach for unlocking the financing required net-zero aligned energy transitions.

PILLAR 5: PARTNERING

Leveraging partnership to accelerate energy transitions

• Building delivery partnerships around country net-zero aligned transition strategies and plans
• Enabling strengthened partnership and peer learning among international and local institutions and networks
• Pooling and connecting efforts beyond the country level to achieve critical mass for progress.

Development co-operation is, by definition, a partnership. It takes at least two sides working together and the quality of the partnership is a key factor for the effectiveness of development co-operation and its potential to generate strong impact. Achieving the global energy transition is a global commitment, whose delivery in essence is a global partnership across all nations. This partnership involves mutual responsibilities – but also the potential to combine and pool respective strengths and efforts, for greater collective momentum, impact and speed of progress. Countries around the world – advanced economic and developing countries alike – are concurrently transitioning their energy systems towards sustainability, with different starting positions, priorities and speed. Learning from countries that have already progressed in their energy transitions is key; and given that the energy sector involves numerous actors at various levels, this exchange and learning presents a cross-cutting opportunity for growth in local capacities and the reinforcement of local economies and businesses. Partnership is key to channelling diverse efforts into combined strength to overcome key bottlenecks and barriers to the net-zero aligned energy transition.

5.1 Building delivery partnerships around country net-zero aligned transition strategies and plans

Under the DAC Approach, the potential of partnership is leveraged to enable different actors to bring their capacities, capabilities and resources together for net-zero aligned energy transitions. Successful energy transitions require a set of actors – systems, networks, institutions, private sector actors and individuals – bringing different assets, contributions and capabilities. Country platforms, such as Just Energy Transition Partnerships (JETPs) or other country-based approaches, are mechanisms to build a partnership of key stakeholders around partner countries' transitions strategies and plans so as to enable and accelerate implementation action which members can support directly, or through the multilateral system. Forceful multi-stakeholder partnerships and country platforms that convene a critical mass of players and are aligned with country priorities and strategies as well political and institutional capital are able to overcome barriers to change. Mobilising both the finance and investment, but also the capacities and capabilities required for net-zero energy transitions, goes beyond what can be achieved through a range of bilateral partnerships alone.

5.2 Enabling strengthened partnership and peer learning among international and local institutions and networks

Under the DAC Approach, local and regional capacity building and peer exchange among countries with similar energy transition challenges are supported as practical, powerful tools to support developing countries in their energy transitions. Exchange and peer learning through regional energy centres, regional and national research and technology institutions, and regional integration and peer exchange is often a powerful mechanism to promote locally adapted technology creation and transfer. It facilitates knowledge exchange on policy and regulatory emerging good practice approaches, as well as business opportunities and solutions, and how these have actually been able to take forward, implemented and delivered in real world settings. Supporting regional and thematic networks that promote exchange among the staff of ministries, energy agencies, private sectors and other relevant actors that can act as platforms for knowledge and technology exchange is a basic, but also efficient and effective way to support such exchange and learning.

5.3 Pooling and connecting efforts beyond the country level to achieve critical mass for progress

Under the DAC Approach, targeted and strategic support is provided to the creation of regional energy markets that facilitate energy transitions. There are several advantages in closer energy system and market integration across countries. In the electricity sector, regional integration of national grids allows to balance renewable electricity production with loads, permitting a higher penetration of intermittent energy sources. Furthermore, regional integration can decrease the barriers to trade in energy services and appliances, provide economies of scale, facilitate the standardisation of technical equipment which can in turn lower cost and increase accessibility. Supporting partner countries in integrating energy markets where possible, through regulatory and infrastructure activities, as well as other measures, holds significant, tangible opportunities for the net-zero aligned energy transition.

Under the DAC Approach, a continued focus to resolve key systemic bottlenecks and market failure is backed up by demonstrated readiness to explore, and contribute to, the development of collective approaches for systemic risk mitigation. Unresolved systemic barriers, such as foreign exchange risks, not only inhibit capital inflows and discourage investments in low-emissions, climate-resilient infrastructure. They also contribute to systemic instability, excessive volatility of local interest rates, and overall high cost of capital, which are fundamental constraints to the investments required for energy transitions. Foreign exchange risk is a massive cost to the provision of finance to developing countries, while no development actor alone can provide the large-scale financial risk mitigation, but partnership approaches can help to deliver collective, up-front risk mitigation to overcome persistent market failures. For example, advance market commitments in the health sector, which unblocked development vaccines for long- neglected tropical diseases. In a similar way, advance market commitments for e.g. future hydrogen purchases at a given minimum price could eliminate uncertainty around future demand that is holding back investment in this area, given the uncertainty of future market demand. The development finance system overall is already paying a very high price for continuing to absorb the cost of foreign exchange risk. Development finance has the potential, and the role, to provide risk financing for potentially transformative new ideas. Investing political and financial capital and resources into partnerships that develop, trial and scale new solutions are a key dimension of supporting net-zero aligned energy transitions and overcoming systemic bottlenecks to progress.

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