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# TURKMENISTAN AND THE VIRTUAL POLITICS OF EURASIAN ENERGY: THE CASE OF THE TAPI PIPELINE PROJECT

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**Introduction**

On 13 December 2015, leaders from Central and South Asia travelled to the outskirts of Mary city (south-eastern Turkmenistan) to participate in the ground-breaking ceremony for the Turkmenistan-Afghanistan-Pakistan-India (TAPI) natural gas pipeline project.<sup>1</sup> The commencement of TAPI construction works is expected to usher in a new era for the commercialisation of Turkmenistan's gas relations with its South Asian neighbours – an issue that has attracted, since the mid-1990s, the interest of the international policy-making community while featuring prominently in the scholarly debate on Eurasian energy security. The December 2015 inauguration may thus enhance the prospects for energy infrastructure integration across Central and South Asia, defusing in this sense the scepticism that has often surrounded the TAPI megaproject (Maini & Vaid 2013). Despite some visible, yet arguably ephemeral, results – including the opening of office premises for the TAPI Pipeline Co. Ltd., based in Dubai (Hasanov 2016a) but incorporated as a Special Purpose Vehicle in the Isle of Man (Prasad 2014) – numerous international observers have continued to

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<sup>1</sup> At an estimated total cost of US\$ 10 billion, and with an approximate route length of 1078 km, the TAPI pipeline is expected to carry annually no fewer than 33 billion cubic meters (bcm) of natural gas. The totality of the project's gas is to be supplied by the Galkynysh field (south-east Turkmenistan) – the world's second largest natural gas field. At the time of writing, the annual distribution of gas traded is determined as follows: Afghanistan will buy 0.5–1.5 bcm per year, while India and Pakistan will each receive annual volumes of 14–16 bcm. Supply and transit contracts are to be negotiated for a maximum length of 30 years. The pricing details agreed in 2012 stipulated the oil-indexation of TAPI gas (The Hindu 2012).

express, even after the inaugural ceremony, strong reservations about the project's overall viability.

Insofar as it intends to look beyond the issue of TAPI feasibility, this study holds no ambition to adjudicate on the project's operational success. Its analytical spotlight is placed on the acceleration that TAPI implementation experienced in 2015 – a process that unfolded independently from improvements in regional security dynamics, alterations in the project's supply-and-demand framework, or the injection of fresh capital into the consortium's funding structure. The article's empirical aim, in this sense, is to delineate the political and economic backdrop against which the December 2015 inauguration took place. To this end, the study regards TAPI, at least in its current incarnation, as a virtual pipeline – an infrastructure project that “exists only in discourse. Its name appears on memoranda, agreements, official statements and press releases. But it does not materialise” (Wiśniewski 2015).

TAPI virtuality is defined by two key features, which are entrenched in the internal politics of the states that host the pipeline's initial sectors, namely Turkmenistan and Afghanistan. In these contexts, TAPI's virtual *raison d'être* shapes domestic discourses of progress that are connected to the project's development: significant “infrastructural promise” (Reeves 2017) is ultimately associated to TAPI, which seems to “encode the dreams of individuals and societies” (Larkin 2013) that live along the 1000 km route unfolding across the Turkmen and Afghan sectors.

The insecurity of the pipeline corridor, and particularly of its Afghan segment (approximate length: 750 km), feeds into the project's virtual essence by obfuscating its future development prospects. The elusiveness of the peace and connectivity nexus (Rubin 2015) links, almost inextricably, TAPI implementation to the establishment of successful peace negotiations with Taliban insurgent factions active across

Afghanistan, in Pakistan's Balochistan province, and, more recently, along the Turkmen-Afghan border. Until this nexus materialises, security problems entrenched in the region's semi-chronic instability will continue to pose an insurmountable obstacle to project completion and, more widely, to the integration of energy infrastructure across the Central/South Asia divide.

It is the "closed [political] system" (van de Graaf & Sovacool 2014) regulating TAPI development that does however confer this project much of its virtuality. Here, a major role is played by the scarcity of information on construction works carried out in the pipeline's Turkmen sector (215 km). As early as February 2016, official propaganda reported the conclusion of "topographic, engineering and survey works" (Khronika Turkmenistana 2016) but, at the time of writing, there is no indirect proof, let alone photographic evidence, of any substantive progress at the infrastructural level. When it comes to TAPI, it is mostly the Turkmen regime – an authoritarian élite presiding over one of the world's most opaque political systems (Anceschi 2008) – that controls "what is made public and what is not, [...] what is kept secret or confidential" (Barry 2013). Construction progress remains unverifiable, obfuscating project development in a storm of conflicting information. There is, as a consequence, no public knowledge controversy surrounding TAPI: lack of transparency *vis-à-vis* the advancement of construction works does ultimately strengthen the pipeline's fundamental virtuality.

It is this very virtuality, paradoxically, that enhances the pipeline's overall visibility: existence in discourse only has transformed TAPI into a much relevant infrastructure project – one that does not need to be constructed, let alone experience a breakdown (Star 1999, 382), to be visible at the international level. As a fundamentally virtual pipeline, TAPI seems to be wielding influence only when it is

employed as a foreign policy tool or, alternatively, resurfaces within the domestic discourses of progress framed by the ruling élites of the four consortium partners, and by those presiding over Turkmenistan and Afghanistan more in particular.

In Afghanistan, infrastructure sits at the very core of key discourses of development articulated by the Presidential Administration led by Ashraf Ghani. Afghanistan's dreams of industrialisation and reconstruction are embodied in a series of ambitious infrastructure projects, including the Lapis Lazuli railroad, the Ring Road, and, in the energy realm, TAPI. As a pipeline for peace, TAPI permeates government-sponsored narratives of reconstruction in which three main forces – peace, connectivity, regional integration – hold the key to Afghanistan's future development: the Ghani Administration remarked that “projects like TAPI will remove the economic shackles that [...] limited Afghanistan during the last 40 years of conflict” (Amin 2016). The pipeline defines the expectations of development held by the Afghan population, as confirmed by the spontaneous street celebrations erupted in Kabul, Helmand, and Jalal-abad provinces on the day of the inauguration,<sup>2</sup> and the eventual proliferation of TAPI-focused initiatives, including the opening of a TAPI Park in Logar province (Rubin 2015) and the popularisation of TAPI-related slogans amongst the Afghan youth.<sup>3</sup>

Does TAPI virtuality inform in corresponding fashion the discourses of progress framed by the Turkmen regime? **The formulation of a comprehensive answer to this question, which identifies the paper's central line of inquiry, has guided the**

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<sup>2</sup> Personal Communication, Independent Energy Specialist, March 2016.

<sup>3</sup> *TAPI pāyān-e jang ast* (TAPI brings the end to the war) is perhaps the most telling of the slogans that young Afghans from the Nimruz province repeated in December 2015 at the margins of a meeting between President Ghani and local elders. For the full video, see: TOLONews 2015.

research<sup>4</sup> showcased here. The article, ultimately, contends that it was a very peculiar version of the symbolism of planned infrastructure predicated by Filippo Menga (2015) that stimulated most decisively the sudden acceleration that TAPI implementation came to experience in 2015. Turkmenistan's authoritarian strategies of resource management constitute in this sense a most appropriate milieu to outline the process whereby TAPI implementation sped up so dramatically throughout 2015. This article does therefore delve into the energy-related facets of Turkmenistan's authoritarian resilience, as it attempts to establish a direct nexus between energy policy-making and the persistence of authoritarianism within the Turkmen political landscape.

The acceleration experienced by TAPI implementation throughout 2015 is the key issue tackled in the article's initial segment, which devotes equal attention to two landmark events that surfaced during the consortium-building process, namely Türkmengaz's emergence as the leader of the TAPI consortium, and the ground-

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<sup>4</sup> As it centres on political systems that are generally inaccessible to foreigners, and foreign researchers more in particular, the argument articulated in this paper is not based on fieldwork research. The contextualisation of Turkmenistan's official manipulation of TAPI virtuality, and the latter's contribution to the energy security agenda of the regime in Ashgabat, are therefore built upon the observation of official and semi-official material published in Turkmenistan by regime-controlled outlets. More specifically, this study is based on the systematic study of the complete 2015-2016 collections of four Russian-language outlets, namely the daily newspaper *Neytral'nyi Turkmenistan* (the official mouthpiece of the Turkmen government), *Türkmen döwlet habarlar agentligi – TDH* (Turkmenistan's state News Agency), the weekly oil and gas magazine *Nebit-Gaz*, and the semi-official information website *Turkmenistan.ru*. This analysis has been rounded off by a series of personal communications – via Skype or email – with experts and media operators working on Turkmen politics and energy, in order to overcome as much as possible the inaccessibility of the policy-making milieu studied here.

breaking ceremony held in December 2015. In its second segment, the study will contextualise these developments within Turkmenistan's energy policy-making process, focusing on a critical backdrop, namely the severe export crisis that has recently come to affect the Turkmen natural gas industry.

Relating TAPI development to Turkmenistan's authoritarian politics identifies the key policy implications of the argument that unfolds here. This article is primarily intended as a contribution to wider policy debates on the management of resource endowments and the making of energy policy in non-democratic contexts. To this end, particular attention will focus on the relatively surprising emergence of Turkmenistan's natural gas state concern – Türkmengaz – as the leader of the TAPI consortium. The pivotal, yet ultimately virtual, role that Türkmengaz continues to play in the consortium has inevitably exposed a series of dynamics internal to Turkmenistan's energy policy-making environment – a very opaque milieu that is simultaneously state-centred *and* regime-dominated. Sketching out the contours of this specific policy environment has to be regarded as one of the study's key ends.

This article also aims to address the broader debate that focuses on the consortium-building dynamics of energy megaprojects. This end will be pursued by delving into the dissemination strategies through which TAPI partners, and Turkmenistan more in particular, informed the energy policy community about the progress that the consortium experienced in 2015. Benjamin Sovacool (2016) suggested that transparent and inclusive processes of energy policy-making are central concerns in the energy security cultures crystallising in both democratic and non-democratic contexts. Andrew Barry (2013) also identified transparency as a core problematique in the preparatory stages of energy infrastructure development, positing the “existence of a domain of activity about which it is thought that



information has not yet been or might never be made public, whether intentionally or not”. In the case of TAPI, this domain acquired an essentially non-transparent and non-inclusive disposition. Technical, legal, and financial facets of TAPI consortium-building have been in this sense enmeshed in a murky narrative that the Turkmen regime carried out with great intensity at both domestic and international level. By unpacking this narrative, this study will suggest that non-transparent consortium-building processes tend to characterise more profoundly infrastructure megaprojects that are, essentially, politically-driven.

### **2015: The politics of the *energomost* and TAPI’s virtual implementation**

On 6 August 2015, Turkmenistan’s Ministry of Oil & Gas Industry and Mineral Resources announced that Türkmengaz would be acting as the leader of the TAPI consortium, bringing to the project “more than fifty years of experience in the development, production, and transportation [*v razrabotke, dobyche i trasnsportirovke*]” of natural gas (TDH 2015a). While in the hindsight this announcement failed to erode the project’s fundamental virtuality, it attracted at the time the interest of policy-makers across the wider Asian continent. The Turkmen regime rapidly proceeded to present TAPI as the latest, and perhaps most critical, module of the *energomost*<sup>5</sup> (energy bridge) – an expansive infrastructure network that, since the Niyazov era, had seemingly connected Turkmenistan and Afghanistan.

In the views of the project’s main supporter, the Asian Development Bank (ADB), the confirmation of Türkmengaz’s leadership constituted a further step

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<sup>5</sup> Sébastien Peyrouse (2016) describes the *energomost* connecting Turkmenistan with Afghanistan as the ensemble of three infrastructure projects, namely an integrated electricity grid, an interconnected railway system, and a developing road transport network.

towards the establishment of a successful consortium, making TAPI a project that will “bring tremendous developmental benefits to the region” (Graeber 2015). Since 2003, the ADB has advised the consortium on a wide range of issues. The Bank acted as Secretariat for the TAPI project throughout the 2000s and, in 2013, came to operate as the consortium’s Transaction Advisor, a role in which it negotiated the establishment of the TAPI Co Ltd and advised on its incorporation (GAIL Voice 2014), steering the process that culminated in August 2015 with the identification of the consortium leader. Incidentally, Türkmengaz’s appointment to the TAPI leadership triggered the payment of a US\$ 30 million success fee, which the ADB was entitled to charge as soon as a consortium leader had assumed its responsibilities (Economic Times 2014).

The elevation of Türkmengaz to a leading position in the project’s implementation phase tackled Turkmenistan’s obsession with the preservation of exclusive control over its natural gas reserves – an authoritarian strategy of resource management that had long obstructed the progress of consortium-building within and beyond the TAPI context. Annette Bohr (2016) remarked that, throughout the post-Soviet era, successive Turkmen regimes endeavoured to systematically preclude the access of international energy companies to onshore upstream production across Turkmenistan’s territory, with the notable exception of the US\$ 4 billion production sharing agreement (PSA) finalised with the China National Petroleum Company (CNPC) to regulate the development of the Bagtyýarlyk contract area in the Lebap *velayat* (region).

This strict policy of impermeability from foreign partnerships has posed an insurmountable obstacle to prior attempts at TAPI consortium-building, complicating enormously PSA negotiations with Total,<sup>6</sup> which had come to represent, in the early

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<sup>6</sup> Personal Communication, Independent Energy Specialist, March 2016.

2010s, the ADB's preferred option to lead the TAPI partners (Sharma 2015). It was the establishment of an appositely tailored consortium that, in August 2015, rebooted the process of TAPI implementation while preserving Turkmenistan's exclusive jurisdiction over the Galkynysh field. The newly-established TAPI Co Ltd holds managing rights *vis-à-vis* the pipeline segments located across Afghanistan and Pakistan.<sup>7</sup> this company plays no role in the extraction activities at the Galkynysh field and, most importantly, wields no power over the 215 kilometres that make up the pipeline's Turkmen sector.<sup>8</sup> Türkmengaz, even while operating in a collective environment – of which it however retains 85 per cent equity<sup>9</sup> – remains “the sole entity marketing the produced gas in international markets” (Ghandi & Lin 2014). The consortium's production component is therefore thoroughly consistent with the ownership structure of the Turkmen hydrocarbon sector, in which state-concerns – Türkmengaz and its petroleum counterpart, Türkmennebit – traditionally accounted for 100% of the production. In the gas sector, this monopoly has been interrupted by the commencement of production at the Bagtyýarlyk cluster field, where CNPC capitalised on multi-billion investments by extracting, between 2007 and 2016, a total of 46 bcm of natural gas of which 57 per cent (Matveev 2008) have reportedly been produced under PSA conditions.

If no foreign partner is allowed upstream stakes in Turkmenistan's onshore gas reserves, “anybody can build a pipeline at the border with Turkmenistan”. John

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<sup>7</sup> The planned route for TAPI does not currently include a substantive Indian sector, as gas is expected to be delivered at a station at the outskirts of Fazirka, an Indian town located at the border with Pakistan.

<sup>8</sup> Personal Communication, Moscow-based energy expert, March 2016.

<sup>9</sup> Personal Communication, Washington DC-based energy industry expert, June 2016.

Roberts's words<sup>10</sup> relate Türkmengaz's involvement in the TAPI consortium to another specific strand of Turkmenistan's gas policy, namely that which regulates the transit strategy of the élite in Ashgabat. The regime headed by Gurbanguly M. Berdymuhamedov continues to be adamant on delivering its own gas at the border, showing relatively little interest in the international commercialisation of its reserves. The TAPI consortium-building process revolved in this sense around the uneasy nexus that sits at the core of Turkmenistan's resource management strategies: Türkmengaz's exclusive jurisdiction over the pipeline's Turkmen sector preserved the impermeability of the resources extracted in the Galkynysh field while maximising, at least on paper, their commercial potential. Türkmengaz's prospected centrality in the TAPI project, rather than electing a regular commercial champion to head the consortium, brought forward a sort of "national champion" (Ericson 2009) that fulfils a set of coordinating roles *vis-à-vis* consortium management, preserving at the same time Turkmenistan's obsessive control over its onshore gas reserves.

The consortium's peculiar configuration stimulates in turn a series of preliminary observations on Türkmengaz's potential contribution to TAPI implementation. The appointment of a consortium leader has to be certainly seen as a positive development, particularly in a project context that, throughout the years, witnessed successive departures of key international players, including Unocal, Gazprom, Petronas, Chevron, and, as we have seen before, Total. Regime rhetoric notwithstanding, Turkmenistan's gas state concern is unlikely to bring to the project the "breadth of experience, quality, and faith" (Michel 2015) that normally defines the commercial champions involved in the development of energy megaprojects (Mitchell & Mitchell 2015).

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<sup>10</sup> Cited in Pannier, 2015.

Türkmengaz's involvement, however opaque it may actually be, makes TAPI standing out *vis-à-vis* other virtual pipeline megaprojects that have recently emerged across Eurasia. Compared to the “consortium of penniless gas companies” (Baev & Øverland 2010) that was expected to support Nabucco, TAPI features *quasi* unparalleled supply capacity, given the certified largesse of the reserves at the Galkynysh gas field. While it shares with the Trans-Caspian pipeline a fundamental uncertainty about “who will undertake the financial burden” for project implementation (CCEE 2015), the peculiar configuration of the TAPI consortium confers this project a relatively greater financeability. A few factors lend further weight to this proposition. To begin with, official statements on Türkmengaz's involvement did not categorically exclude that international companies might join the consortium at a later stage (TDH, 2015a). An additional source of capital is represented by the international financial organisations, which have traditionally regarded TAPI as a golden opportunity to fulfil their developmental agendas.<sup>11</sup> Ultimately, however, TAPI construction works have reportedly begun without definitive clarity on the project's financial backdrop.

The peculiar contours of TAPI consortium-building and the cloud of uncertainty that continues to obfuscate the project's financial future ultimately probe the key ends pursued by the ground-breaking ceremony of December 2015. Was this ceremony a merely symbolic event that inaugurated a fundamentally virtual pipeline?

The timing of the ceremony, more in particular, stimulates a few interesting conclusions. As it was held during the jubilee celebrating the 20<sup>th</sup> anniversary of the official adoption of Turkmenistan's neutrality, the inauguration of TAPI construction works contributed indirectly to the campaign of international promotion in which the

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<sup>11</sup> Personal Communication, Moscow-based energy expert, March 2016.

Turkmen regime was engaged in late 2015. The élite in Ashgabat enmeshed TAPI progress in neutrality-focused narratives, exploiting the rhetorical potential held by the state's energy industry. The policy of Positive Neutrality, according to the official press, established an environment of peace, stability, and development that supported TAPI implementation and the expansion of the *energomost* connecting Turkmenistan with its southern neighbours (TDH 2015b). By highlighting the contributions that the *energomost* is reportedly making to the stabilisation of regional geopolitics, Turkmen propaganda endeavoured to glorify the regime that is overseeing the completion of this infrastructure network. This latter narrative conforms to a well-established discourse of leadership legitimation that Turkmen state media formulated and promoted throughout the 1990s and early 2000s. Through TAPI implementation, and indirectly via Türkmengaz's accession to the consortium leadership, official propaganda did furthermore intend to present Berdymuhamedov as a key figure in the geopolitics of Eurasian natural gas. In this context, energy policy has come to underpin Turkmenistan's local version of the "cult of personality by proxy" that Laura Adams and Assel Rustemova (2009) saw as a fundamental component of Central Asia's authoritarian styles of governmentality. Normally excluded from the symbolic spectacularisation of the Turkmen state, energy policy has hence become integral to the discourses of legitimacy most recently framed by the regime in Ashgabat.

Its undisputable rhetorical relevance notwithstanding, the 2015 ceremony also addressed a specific set of pragmatic issues that intersected with Turkmenistan's idiosyncratic élite politics. Many<sup>12</sup> of the conversations held while researching this article did not exclude that the December 2015 ceremony contributed to secure the

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<sup>12</sup> Personal Communication, RFE/RL Turkmen Service Journalist, March 2016.

jobs of a number of officials working in Turkmenistan's energy sector. The presidential inner circle, in this sense, might have regarded TAPI's formal inauguration as an indicator of steady progress towards the implementation schedule set in November 2015, when a government *ukaz* (decree) mandated a rigid 3-year timeframe for the completion of the TAPI project (Hasanov 2015). The ceremony's input to the stabilisation of Turkmenistan's intra-élite equilibrium was however temporary and narrowly limited to the mid-level echelons of the Turkmen energy sector: Muhammetnur Halylov, Turkmenistan's Minister of Oil & Gas Industry and Mineral Resources, was removed from his ministerial position on 8 January 2016, less than a month after the TAPI inauguration. Yagshygel'di E. Kakaev<sup>13</sup> – the cadre who has been overseeing TAPI operationalisation for over a decade – survived, until the spring of 2017,<sup>14</sup> the numerous rounds of reshuffles that took place in the six months that followed the inauguration ceremony.

If speculating on the ceremony's backdrop constitutes a problematic endeavour, assessing the progress of post-inauguration construction works represents an even more challenging undertaking. President Berdymuhamedov has demanded a speedy implementation for the TAPI project; his public addresses have often elaborated on the imperative necessity to accelerate the preliminary stages of the pipeline's construction.<sup>15</sup> Official views on the expected length of the implementation

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<sup>13</sup> As Turkmenistan's deputy prime minister, chairman of the National Agency for Management and Use of Hydrocarbon Resources, and the president's top advisor for gas issues, Ya.E. Kakaev has to be regarded as one of the most powerful cadres in the Turkmen gas sector. For his complete biography, see: *Neytral'nyi Turkmenistan*, 23 February 2007, p. 1.

<sup>14</sup> For the decree dismissing Kakaev from his deputy ministerial position, see *Neytral'nyi Turkmenistan*, 6 April 2017.

<sup>15</sup> Personal Communication, RFE/RL Turkmen Service Journalist, March 2016.

process noted that works ought to be completed in the shortest possible time (*v szhatye sroki*), and ideally by December 2018 (Komarov 2015a). The Turkmen energy sector had virtually no choice but to adjust to this tight schedule, embarking upon an implementation path that, to date, appears at best rushed and disarticulated.

In September 2015, Turkmen authorities claimed that local experts had already mapped “more than two dozens [of kilometres]” of pipeline tracks (Komarov 2015b). In early February 2016, almost two months after the inauguration, Turkmen sources remarked that an “optimal route” for TAPI was yet to be identified. Shortly after (26 February), Kakaev informed the Cabinet of Ministers that the local contractor, *Türkmennebitgazgurlushyk*, managed to lay out no fewer than six kilometres of pipes (TDH 2016a). The contractor company, in late March, announced the beginning of pipe welding in the linear section of the pipeline’s Turkmen sector (Hasanov 2016b). On 8 April, Kakaev confirmed that TAPI shareholders had set aside US\$ 200 million to fund “various studies, preliminary engineering, environmental design and various research of the route” (Reuters 2016a), implicitly admitting that the pipeline’s progress was not as advanced as previously communicated.

Logistic uncertainty wields detrimental influences on project costing. No clear information on the prospected route and, most importantly, the lack of geological data on the Galkynysh field have to date obstructed the development of a sound pricing structure for the TAPI pipeline project.<sup>16</sup> Such profound uncertainty does in turn translate into operational murkiness, challenging whether TAPI implementation, at least in its current form, is concretely inscribed in a binding chain of “long-term contracts, direct, long-term linkages and permanent infrastructure” (Shaffer 2013), and whether the trading states involved in the megaproject have indeed expressed

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<sup>16</sup> Personal Communication, Washington DC-based energy industry expert, June 2016.



“credible commitments to uphold cross-border transit arrangements” (Stulberg 2012). Scarcity of reliable information on construction progress questions in turn the role that contested knowledge (De Bruijn & Leijten 2007) plays in the TAPI decision-making process. Operational murkiness and opaque mechanisms of knowledge creation obfuscate the pitfalls of uncontested decision-making behind an “overblown rhetoric” (Baev & Øverland 2010), instigating the systematic manipulation of TAPI progress for domestic political purposes: Berdymuhamedov endeavoured to present the operationalisation of the TAPI project as a major achievement of his government.

The process whereby the regime manipulated opaque progress in infrastructure development built to all intents and purposes on the spectacularisation of the ground-breaking ceremony held in December 2015, replicating in this sense a rhetorical mechanism that, according to Laura Adams (2010, 3), sat at the very core of Uzbekistan’s politics of the spectacular. The grandiose commencement of construction works meant to dispel any doubts on the project’s feasibility, hence promoting an élite-dominated version of reality, popularised across Turkmenistan through a series of information flows exclusively controlled by the regime in Ashgabat.

Regime rhetoric notwithstanding, the acquisition of direct proof of construction has proved a very difficult task. Turkmen state television had allegedly reported on TAPI progress<sup>17</sup> but the attention that local media continued to devote to this specific pipeline appears to be relatively minimal, especially when compared to the frenzy that, in the mid- and late 2000s, accompanied the construction of the Turkmenistan-China gas pipeline.<sup>18</sup> The information monopoly enforced by the

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<sup>17</sup> Personal Communication, Alternative Turkmenistan News Journalist, March 2016.

<sup>18</sup> Personal Communication, RFE/RL Turkmen Service Journalist, March 2016.

Berdymuhamedov regime is persistently obfuscating our understanding of TAPI progress, enhancing in turn the pipeline's virtuality. The absence of public knowledge controversies on TAPI implementation reveals in full the opacity of Turkmenistan's authoritarian praxis of energy policy-making. TAPI's peculiar implementation patterns, which featured a substantive lack of detailed information on the pipeline's route, share in this sense many similarities with energy megaprojects that are politically-driven, and the Altai pipeline more in particular (Henderson 2014).

In Turkmenistan there is no internal debate on the feasibility or the progress of the TAPI project. Türkmengaz's monopoly over the pipeline's initial segment – however virtual the latter may actually be – dovetails with, and is mutually reinforced by, the regime's unchallenged control of domestic dynamics of information dissemination. As it is to unfold within an authoritarian milieu that is hegemonically controlled by Turkmenistan's ruling élites, TAPI progress will ultimately remain a radically top-down phenomenon, hence conforming to the definition of post-Soviet virtual politics framed by Andrew Wilson (2005, 41), who regarded interactive frameworks between local misinformed population and omnipotent authoritarian élites with no external constraints as the ideal context for the germination of virtual political practices. To date, opaque assessments of project feasibility limited project development to the discursive realm: the TAPI pipeline is therefore surfacing as a state artefact (Féaux de la Croix 2016), crystallising as an infrastructural project in which state power undergirds a modern, yet ultimately virtual, reorganisation of 'space, time, and personhood' (Mitchell 1999, 91).

When it comes to the pipeline's construction, the Berdymuhamedov regime does not have to win over the hearts and minds of the Turkmen population. TAPI implementation is hence unlikely to witness the launch of promotional campaigns

analogous to those designed by Gazprom in support of the Altai pipeline project (Plets et al 2011), nor is it expected to engage in performative practices addressing the project's multifaceted impacts over the Turkmen territory and its population (Barry 2013). This proposition might actually explain the regime's systematic failure to formulate narratives of progress and development that centre on TAPI. Turkmen authoritarianism, in general terms, is affected by a sort of "infrastructural fetishism" (Dalakoglu 2010). Official propaganda has therefore not hesitated to glorify the regime's imprint on Turkmenistan's urban landscapes, remarking at the same time that energy infrastructure delivered progress to the country's most remote corners, including the right bank of the Amu Darya river, once "bare hills and sandy plains, a land of sandstorm and mirages", which the construction works at the Bagtyýarlyk fields reportedly transformed into "one of Turkmenistan's most vigorous industrial centres" (Komarov 2015c). The TAPI pipeline project is conspicuously absent from these rhetorical narratives: an essentially virtual pipeline implemented through a fundamentally murky approach seems therefore to hold very little rhetorical potential, even for Turkmenistan's notoriously creative propaganda machine.

This virtuality has not ultimately diluted the pipeline's relevance. Since the opening ceremony and the commencement of construction works, decision-makers in Ashgabat have begun to regard TAPI operationalisation as an indispensable step towards the full execution of Turkmenistan's energy agenda. The Berdymuhamedov regime thus placed TAPI implementation at the core of its international activity: in mid-2016, the Turkmen president invited several foreign partners, namely Qatar, Saudi Arabia (Hasanov 2016c) and Japan (Hasanov 2016d), as well as international financial institutions, including the European Bank for Reconstruction and Development (Babayeva 2016) and the Islamic Development Bank (Reuters 2016b),

to join the project. Berdymuhamedov's moves reveal Ashgabat's growing preoccupation *vis-à-vis* the financeability prospects of the consortium. What specific factors contributed to enhance so rapidly TAPI's strategic importance *vis-à-vis* Turkmenistan's energy policy-making? As we will see in the article's next section, a detailed answer to this critically important question can be articulated only by relating the project's virtual implementation to Turkmenistan's struggling economy.

### **TAPI: A virtual remedy for Turkmenistan's export crisis**

#### [The post-2009 evolution of Turkmenistan's gas exports](#)

On 4 January 2016, Gazprom publicly announced the immediate cessation of its purchases of natural gas from Türkmengaz (RIA Novosti 2016a). As it terminated the established, yet typically turbulent (Øverland 2009), gas relationship between Moscow and Ashgabat, Gazprom's decision cut off one of three main destinations to which Turkmenistan has exported its gas throughout the post-Soviet era. Russian experts, perhaps instrumentally, exaggerated the impact of this decision over Turkmenistan's national security (RIA Novosti 2016b). Gazprom's withdrawal, however, raises a number of genuine questions about the future viability of Turkmen economic rentierism. While it certainly represents an economic legacy entrenched in the management praxis established in the Soviet era (von Hirschhausen & Engerer 1998), Turkmenistan's extreme dependency on one single resource intensified throughout the 1990s and 2000s: in 2005, EU data estimated at 60-80 per cent the share of energy commodities over Turkmenistan's total exports (CASE 2008). The vital importance that natural gas continues to hold *vis-à-vis* Turkmenistan's economic equilibrium is hence indisputable: in 2014, the energy sector accounted for 35 per cent of Turkmenistan's GDP, 90 per cent of total exports, and 80 per cent of fiscal

revenues (World Bank 2015). The sudden (but certainly not unexpected) closure of the Russian route may therefore impose additional economic pressure upon the Berdymuhamedov regime. To further contextualise this latter proposition, Figure 1 outlines the evolution of Turkmenistan's gas trade between 2006 and 2016.

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The data<sup>19</sup> upon which the figure has been elaborated reveal the peculiar nature of Turkmenistan's current export crisis, indirectly highlighting the essentially virtual contribution that TAPI might make to the resolution of this very crisis. The year 2015 sanctioned the conclusion of a parabolic evolution through which Turkmenistan substituted import dependency on Russia's gas purchases with an equally destabilising over-reliance on Chinese gas imports. In 2008, Gazprom purchases represented 86.6 per cent of Turkmenistan's total exports; in 2015 – the year in which the Islamic Republic of Iran emerged as the second largest importer of Turkmen gas – China bought no less than 73 per cent of the gas exported by Turkmenistan. This dependency increased significantly across a relatively short timeframe: in 2013, just over 60 per cent of Turkmen gas was sold on the Chinese market.

This is not however to say that gas revenues are rising correspondingly. In 2015, Chinese purchases of Turkmen gas increased by 8.6 per cent on the 2014

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<sup>19</sup> The data series on Russia is compiled on information available from the Gazprom official website, with the exception of data for purchases in 2006, 2015 and 2016, which are respectively based on Lee (2014) and the 2016 and 2017 editions of the *BP Statistical Review of World Energy*. The data series on China and Iran have been elaborated on various editions of the *BP Statistical Review of World Energy*, with the exception of the 2009 data on Iran's purchases, which is from Lee (2014).

baseline; the revenues<sup>20</sup> associated with these purchases had however decreased by 18 per cent year-on-year. China's growing importance in the Turkmen trade system, in this sense, marginally contained the negative effects that the progressive reduction of Gazprom purchases exerted on Turkmenistan's commercial balance: in 2012-2015, when Turkmenistan's gas exports had decreased by 8.49 per cent, total revenues contracted by 12.1 per cent. Recent IMF projections paint an even bleaker picture: in May 2016, a routine document forecasted a 51 per cent decline in Turkmenistan's total hydrocarbon revenues across the 2013-2016 timeframe (IMF 2016). This statistical contextualisation determines the specific nature of Turkmenistan's current gas crisis: in 1997 (Sagers 1999) and 2008 (Heinrich 2014), sharp revenue declines were instigated by the traumatic interruption of gas deliveries while the gas volumes exported by Turkmenistan in 2015 and 2016 are relatively steady when compared with post-2011 data.

It is CNPC's expanding role in the production of Turkmenistan's gas that sits at the core of the current revenue crisis, while the crystallisation of China's de facto monopoly over the transit of Turkmen gas reveals in full the long-term unsustainability of the energy policy pursued by the Berdymuhamedov regime. While it managed to disentangle from Gazprom's hegemonic influence through the opening of the Turkmenistan-China pipeline in December 2009, Turkmenistan has since witnessed a progressive reduction in the revenues reaped for the export of steady volumes of natural gas. The gas traded via the Turkmenistan-China pipeline is part of a pay-or-purchase agreement (Bohr 2016), which commits Turkmenistan to repay the sum invested by CNPC in the construction of the pipeline and the development of the

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<sup>20</sup> Data on total gas revenues are from the World Integrated Trade Solutions database, available at: [http://wits.worldbank.org/about\\_wits.html](http://wits.worldbank.org/about_wits.html).

Galkynysh field. Three distinct uncertainties complicate the formulation of an informed estimate of the timeframe within which the Turkmen government will be able to complete the repayment of this US\$ 10 billion loan.

To begin with, there is some scepticism surrounding Turkmenistan's medium-term capacity to deliver on its contractual obligations, which set the annual volume exportable to China at 65 bcm/y. A more detailed look at Ashgabat's gas relations with Russia and Iran suggested that, historically, gas volumes traded by Turkmenistan have always been inferior to the quotas agreed at contract negotiation stage.<sup>21</sup> Second, the very opaque configuration of Turkmenistan's production structure does not allow for a precise breakdown of the origins of the gas volumes currently exported to China, complicating in turn the precise determination of quotas produced by Türkmengaz and those by CNPC in the Bagtyýarlyk area (Bohr 2016). Finally, the medium-term sustainability of current pricing arrangements between China and Turkmenistan remains questionable, as oil-indexed Turkmen gas delivered at the Chinese border continues to be relatively more expensive (Chen 2014) than the gas exported by other Central Asian producers (bne Intellinews 2016), and certainly more than the average residential rate in major Chinese cities (Yi 2013). Numerous experts have predicted an inevitable revision of current pricing arrangements, suggesting that China might request lower trading prices for the purchase of Turkmen gas (EBRD 2015).

Although the regime in Ashgabat is reportedly not worried about the internal repercussions of total dependency from Chinese gas imports (Kuchins, Mankoff &

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<sup>21</sup> Since the finalisation of the 2003 gas deal between Russia and Turkmenistan, Türkmengaz delivered less than half of the annual agreed volumes, which were expected to total 1.8 tcm over a 25-year period. A similar failure to fulfil agreed quotas has recently come to characterise the Turkmenistan-Iran gas relationship: in 2012-2015, Turkmenistan delivered less than 50 per cent of the total volumes (14 bcm) it agreed to trade with Iran (Natural Gas Europe 2015).

Backes 2015), the viability of Turkmenistan's essentially mono-directional export policy remains questionable. And it is precisely at this juncture that TAPI implementation might come to the fore as the regime's preferred solution to the revenue crisis currently experienced by Turkmenistan. The development of export infrastructure represents a familiar approach for Turkmen energy policy-makers, insofar as it challenges, at least on paper, the transit vulnerability intrinsic to Turkmenistan's landlocked geography (Idan & Shaffer 2011) and, most importantly, continues to postpone indefinitely structural attempts at economic diversification. TAPI implementation ensures in this sense the preservation of Turkmenistan's economic rentierism, safeguarding an un-diversified economic landscape in which the regime enjoys unrestricted control over gas revenues (Pleines & Wöstheinrich 2016).

The perpetuation of non-transparent strategies of revenue management is underpinning TAPI's prospected implementation path: at no point during the consortium-building process did the ADB or other actors advise the Turkmen government to explore new avenues for the management and the investment of direct revenues earned from TAPI, including the establishment of a sovereign wealth fund. The ADB's reluctance to support alternative options for TAPI revenue management ultimately departs from good practices emerged in other consortia, and more in particular the Chad-Cameroon Petroleum Development & Pipeline Project, in which the World Bank "stipulated that all direct oil revenues earned by Chad [...] had to be stored in an offshore escrow account" that also included a stabilisation fund (Kojucharov 2007, 482).

It is to essentially non-transparent ends that the Turkmen élite discourse on TAPI has come to focus on the rapidity of implementation, placing the "necessity of [project] realization" (Menga 2015) at the core of the most recent iteration of



Turkmenistan's energy policy. The feasibility of the pipeline's transit route, as we have seen, continues to be clouded by contradicting information flows. The regime in Ashgabat granted as a consequence some critical relevance to Turkmenistan's supply capacity while designing the path of TAPI operationalisation. At the Cabinet of Ministers held on 15 January 2016, the president himself offered a series of tips to Kakaev on the options available to accelerate the development of the Galkynysh field (TDH 2016b). An explicit offer to partner up in the exploration and expansion of the Galkynysh field was also made to King Salmān ibn 'Abd al-'Azīz Āl Sa'ūd during Berdymuhamedov's official trip to Saudi Arabia in mid-2016 (Neftegaz.ru 2016). Enhanced delivery capacity may also be seen as a targeted response to the prospected revision of the TAPI pricing arrangements: India is known to be exploring future scenarios for price renegotiation, as the agreed price of US\$ 9.17/MMbtu no longer matches the post-2014 reality of low commodities prices.<sup>22</sup> An enhanced supply capacity, finally, could alleviate Turkmenistan's revenue crisis without the construction of new export infrastructure, suggesting that TAPI's virtual implementation might promote a sort of fictional multi-directionality,<sup>23</sup> serving Turkmenistan's purposes in the negotiations of a new purchase deal with Gazprom or new price arrangements with Ashgabat's Chinese partners.

However virtual its implementation may ultimately be, TAPI remains a pipeline for regime stability: its operationalisation might strengthen the élites' economic monopoly, addressing in the short term the ramifications of declining gas

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<sup>22</sup> I owe this point to Manish Vaid, who kindly shared with me some of the results of his research on India's TAPI policy.

<sup>23</sup> Personal Communication, Moscow-based energy expert, March 2016.

revenues. These ramifications, as the article's next segment aims to demonstrate, eroded in quite dramatic fashion the legitimacy of the Berdymuhamedov regime.

### Internalising Turkmenistan's export crisis

The devaluation of 1 January 2015 embodies more than any other development Turkmenistan's faltering economic performance. While it formed part in the monetary crisis erupted across post-Soviet Eurasia in 2014, the devaluation of the manat – which lost at the time 18.9 per cent of its value – revealed the government's declining capacity to prop up an essentially non-performing currency. The revenue crisis described above played a central role in setting into motion this latter dynamics.

While the traditional opacity of Turkmen budgetary accounts prevents precise assessments of the decline experienced by the regime's spending capacity, the impact of the revenue crisis over Turkmenistan's real economy can be appreciated in full by looking at two distinct, yet certainly not unrelated, dynamics. On the one hand, foreign currency remains largely unavailable across the entire Turkmen territory. On the other, the regime accelerated the suspension of a set of energy subsidies<sup>24</sup> that traditionally supported residential and transport consumption as well as the producers operating in the agro-industrial sector (Pomfret 2006). Energy subsidisation performed crucially important functions in Turkmenistan's authoritarian strategies of

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<sup>24</sup> The most extensive revision of Turkmenistan's gas subsidisation system was carried out in early 2014, when the government set free monthly quotas of 50cm per household, charging consumption over this threshold at 20 manat (US\$ 5.71 at post-devaluation rate) per 1000 cm (bne Intellinews 2014). Artificially low fuel prices also resulted from Turkmenistan's protracted subsidisation practice: Lucas Davis (2016) reported that, in 2014, a litre of gasoline bought in Turkmenistan would cost no more than US\$ 0.20. Beyond energy, Turkmenistan's subsidisation system also included "water, salt, flour and other goods" (ICG 2003).

economic management: the cost of implicit and explicit energy subsidies reached 20 per cent of total GDP in 2010 (EBRD 2014), a 100 per cent increase on the 2000 baseline (Petri et al 2002). As the suspension of domestic subsidisation practices rewrote Turkmenistan's energy social contract, the population's declining energy security may now be seen as erosive of the regime's authoritarian stability.

The internalisation of the revenue crisis also unveils the difficult economic predicament of Türkmengaz, the TAPI consortium leader. In early 2015, a comprehensive reorganisation of Türkmengaz's workforce led to an undisclosed number of staff redundancies, which did reportedly target personnel operating a series of compressor stations situated along the Central Asia-Centre pipeline (exporting to Russia) and the exporting routes to Iran (Serdar 2015). Significant personnel cuts were also imposed on the state concern for exploration and field development, TurkmenGeologiya, which lost 30 per cent of its staff in September 2015 (Khronika Turkmenistana 2015). In 2016, another massive round of redundancies hit one of Türkmengaz's regional subsidiaries, namely Dashoguzneftegazstroy, which witnessed the closure of two of its departments and the ensuing layoff of at least 2000 workers.<sup>25</sup> Some<sup>26</sup> of the interviews conducted while researching this article also highlighted the recent accumulation of wage arrears in different segments of Turkmenistan's gas sector. The precarious state of the local gas industry led to an increase in workers' mobilisation, a very rare occurrence in Turkmenistan: while there are reports of numerous strikes erupted in 2015 and 2016 across the wider Turkmen territory, this

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<sup>25</sup> Personal Communication, RFE/RL Turkmen Service Journalist, March 2016.

<sup>26</sup> Personal Communication, Alternative Turkmenistan News Journalist, March 2016.

state of unrest has been particularly visible amongst workers employed by Türkmengaz subsidiary companies in the Lebap *velayat*.<sup>27</sup>

Growing job insecurity amongst Türkmengaz workers has been mirrored by an endemic instability affecting the company's leadership. The chairmanship of Türkmengaz has become a very precarious post: out of the last four chairmen, only Ashirguly Begliev remained at the helm for over 12 months.<sup>28</sup> The regularity with which staff turnover has been executed at the highest echelons of Türkmengaz indicates that Turkmenistan's energy policy-making continues to be a process monopolised by the central regime. The state's gas concern has no stakeholder role to play in this process, inasmuch as it has not featured, to date, an autonomous drive to pursue targeted projects, let alone a genuinely independent policy agenda. **There is very little evidence to anticipate that a new role for Türkmengaz may result from the reform packages implemented in July 2016, when a presidential decree abolished both the Ministry of Oil & Gas Industry and Mineral Resources, and the State Agency on Management and Use of Hydrocarbon Resources, thus placing the Turkmen energy**

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<sup>27</sup> Personal Communication, Alternative Turkmenistan News Journalist, March 2016.

<sup>28</sup> Denison (2012, 153) noted that the rotation of senior personnel defines the intersection between politics and energy in Turkmenistan, remarking that élites working in the gas industry are periodically reshuffled around the state energy sector. A closer look at Türkmengaz personnel policy, however, revealed that the chairmanship of the state gas concern has recently become a terminal position in a cadre's career. Upon their dismissals from Türkmengaz, all recently outgoing chairmen (Ch. Khummadov, K.B. Abdyllaev, A. Begliev) have reportedly been moved to unspecified posts. No trace of their post-Türkmengaz career has been found in Turkmenistan's official media in general and *Neytral'nyi Turkmenistan* more in particular, hence suggesting that the cadre management practice described by Michael Denison may have been abandoned by the Berdymuhamedov regime.

sector under the direct supervision of Türkmengaz and its petroleum counterpart, Türkmennebit.<sup>29</sup>

This latter consideration bears significant influence on the characterisation of the TAPI decision-making environment advanced throughout this article: as Türkmengaz is performing the duties of consortium leader, the political priorities of the Berdymuhamedov regime are bound to wield a key influence over the project's implementation as well as on the future directions to be taken by the consortium as a whole.

Türkmengaz's capacity to execute the TAPI agenda, nevertheless, has been repeatedly questioned, on the basis of the very limited financial contribution that the Turkmen gas concern might make to the project<sup>30</sup> and, most interestingly, the allegedly scarce expertise in project management and development available within the company ranks. The pool of Turkmenistan's talent in the energy sector is rapidly shrinking: as an increasing number of local experts<sup>31</sup> continue to leave Turkmenistan in order to pursue work and training opportunities abroad,<sup>32</sup> domestic opportunities for oil and gas training are few and far between, as confirmed by the drastic reduction of Turkmenistan's energy training institutions that was inscribed in the extensive reform of the gas sector carried out in early January 2016 (TDH 2016c).

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<sup>29</sup> See: "Ukaz Prezidenta Turkmenistan ob uprazdnenii Ministerstva nefti i gaza Turkmenistan", *Neytral'nyi Turkmenistan*, 16 July 2016, p. 4.

<sup>30</sup> Personal Communication, RFE/RL Turkmen Service Journalist, March 2016.

<sup>31</sup> Personal Communication, Alternative Turkmenistan News Journalist, March 2016.

<sup>32</sup> Training appears to play a key role within Turkmenistan's gas relationship with China. CNPC is reportedly providing financial support to at least 80 Turkmen students pursuing energy-related degrees in Chinese and British universities (Komarov 2015c).

At large, any negative assessment of Türkmengaz's technological capability and financial power probes Turkmenistan's perceived capacity to transform its large gas endowment into a resulting form of gas empowerment (Palazuelos & Fernández 2012). In more specific terms, Türkmengaz's current predicament raises many doubts about the capacity of Turkmenistan's gas industry to sustain in full the acceleration that TAPI operationalisation experienced in 2015. Turkmenistan's energy sector, in this sense, represents an inhospitable milieu for TAPI implementation: the general lack of domestic expertise and capital is exacerbated by the regime's reluctance to open up to external talent and foreign capital. The benefits that TAPI progress might bring to Turkmenistan's real economy are hence confined to a very virtual realm. While the regime continues to maintain that a fully operationalised TAPI is expected to contribute to the advancement of the local economy through the creation of 12000 jobs (TDH 2016c), the Turkmen official sources consulted while preparing this article provided no detailed information on the regional and structural breakdown of the employment component allegedly associated to TAPI development.

It is hence possible to suggest that TAPI's virtual implementation might fail to address even the most superficial energy-related components of Turkmenistan's economic crisis. In the narrow interpretation made by the élite in Ashgabat, the TAPI megaproject does not aim to shape the society it is designed to serve. TAPI is hence a pipeline for regime stability, a non –“socially constructed artefact” (Hughes 1987), an infrastructure project that remains essentially integral to the regime that regulates its fundamentally virtual implementation. TAPI thus contributes to Turkmenistan's peculiar form of infrastructural fetishism, substantiating Peter Leonard's argument<sup>33</sup> that equates the regime's perception of its own success to the state's capacity to

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<sup>33</sup> Cited in Pannier, 2016.

develop a widely visible, but ultimately self-serving, infrastructure network. The development path currently set for the pipeline's initial sector confirms that, in Turkmenistan, the logic of power preservation continues to leave very tangible imprints upon the process of energy policy-making.

## **Conclusions**

While discussing the December 2015 ground-breaking ceremony and the ensuing commencement of TAPI construction works, Ashay Abbhi (2016) queried whether the acceleration experienced by project implementation in 2015 has to be seen as a “a landmark that signals a departure from history of scepticism into a future of cooperation”. This article has indirectly answered Abbhi's question, positing that, due to its fundamental virtuality, the international relevance of the TAPI pipeline project is not to be perceived as an exclusive function of the progress achieved at implementation stage. A closer look at the policy contexts to which the consortium members related TAPI implementation clarifies further this latter proposition. For Pakistan and India, TAPI is primarily a vehicle to preserve a series of communication channels that remain central to local processes of conflict resolution and prevention. In Afghanistan, both the government and the population have continued to perceive TAPI as a pipeline for peace, leaving its relevance *vis-à-vis* local and national dynamics of energy security at the very margins of any policy debate on the project.

It is with the Turkmen policy context, however, that this study engaged most directly. By enmeshing TAPI implementation in Turkmenistan's energy policy-making milieu, the article delineated the contours of Türkmengaz's consortium leadership. To be properly understood, the function performed by Türkmengaz within the TAPI consortium needs to be related to wider debates on the contribution made by

the national energy companies of authoritarian political systems to the construction and the management of energy megaprojects.

In the case of TAPI, Türkmengaz is offering a virtual leadership to a financially precarious consortium. Turkmenistan's state natural gas concern has very little capital to invest, minimal technological know-how, and, due to its intimate connection with the logic of authoritarian stability that dominates Turkmen politics and policy-making, no intention to partner up with foreign actors towards the achievement of the consortium's operational targets. Türkmengaz's input in the consortium hence features none of the characteristics – access to cheap capital, motivation beyond profit, and a generally easier access to resources – that Benjamin Sovacool and Christopher Cooper (2013, 20) outlined to describe the influences exerted by national energy companies upon energy megaprojects.

Beyond its duties as consortium leader, Türkmengaz is reportedly managing project implementation in the pipeline's Turkmen sector. The opaque information dissemination strategy devised by the regime in Ashgabat prevented any independent assessment of the progress made by the construction works initiated in December 2015. At the same time, lack of details on project development obstructed the emergence of domestic debates on the social and environmental impact of the megaproject. This article found no sufficient evidence to establish whether TAPI implementation is actually performed in a way that “not only minimizes damage but actually improves [the] standards of living” of the wider Turkmen population (Sovacool 2013, 144). No public knowledge controversy is surrounding project implementation, and TAPI remains a politically-driven megaproject operating in an obsessively authoritarian landscape. There is therefore very little doubt about the political facet of the pipeline's overall impact: the authoritarian stability of the



Berdymuhamedov regime will greatly benefit from the rise in Turkmenistan's gas revenues resulting from TAPI operationalisation.

TAPI virtuality fits rather well within Central Asia's current praxis of energy megaproject management, in which authoritarian political systems continue to place significant emphasis on the development of colossal infrastructure projects, including the Rogun Dam in Tajikistan and the Kashagan oil field in Western Kazakhstan. The virtual operationalisation of these projects participates in regime narratives that are respectively centred on Tajikistan's "national pride and honor" (Menga 2015) and Kazakhstan's economic prosperity. TAPI remains a planned infrastructure project designed to enhance regime stability: its virtual operationalisation, as this article has concluded, sanctioned the ultimate intersection between the energy policy-making praxis of the Turkmen state and the authoritarian politics performed by the Berdymuhamedov regime.

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