

The Impact of China's New Air Pollution Regulation on American Direct Investment

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Every year, China's air quality is reaching hazardous level. Accordingly, China is adapting stringent environmental regulations under the new 13th Five Year Plan. The noticeable developments in the new air pollution regulations include: (1) mandatory air pollutant disclosure requirement; (2) shift towards non-compliance liability rule; and (3) increased penalty for transgression against wider range of industries. This paper first explains that these developments will induce American investments in China to carefully draft investment contracts, particularly confidentiality and limited liability clauses to minimize the risk of harsher penalties. The paper then argues that China's stringent pollution regulations will not negatively affect American investment trend in China, mainly because most American investments already adhere to the OECD standard, and disclosing environmental information will enhance entity's good reputation and attract investors.

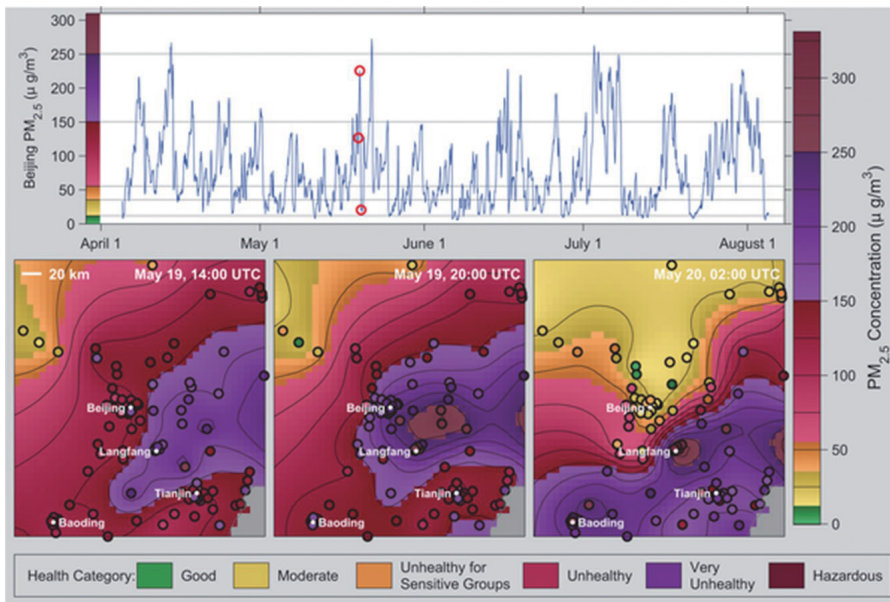
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1. Introduction

The ‘Airmageddon’ is a rising new term in China’s twitter, Weibo, which describes the severe air pollution in the country. Remaining true to its original meaning, in January 2013, China’s air pollution was described to reach the level of ‘post-apocalyptic,’ and ‘beyond belief.’¹ In December 2015, Beijing closed all schools, as well as outdoor constructions under the red alert, the highest possible warning level for air smog.² Even in 2016, air pollution level in China’s main cities remained higher than the World Health Organization’s upper safety limit, despite the slight improvement of air quality in Beijing since the first quarter of 2014.³ The following data (Figure 1) shows the serious situation of air pollution in China.

Figure 1: (Top) Time Series of PM_{2.5} Concentration at Beijing Extracted from the Interpolated Field. (Bottom) Maps of Interpolated PM_{2.5} Concentration during a Period of High Pollution.⁴

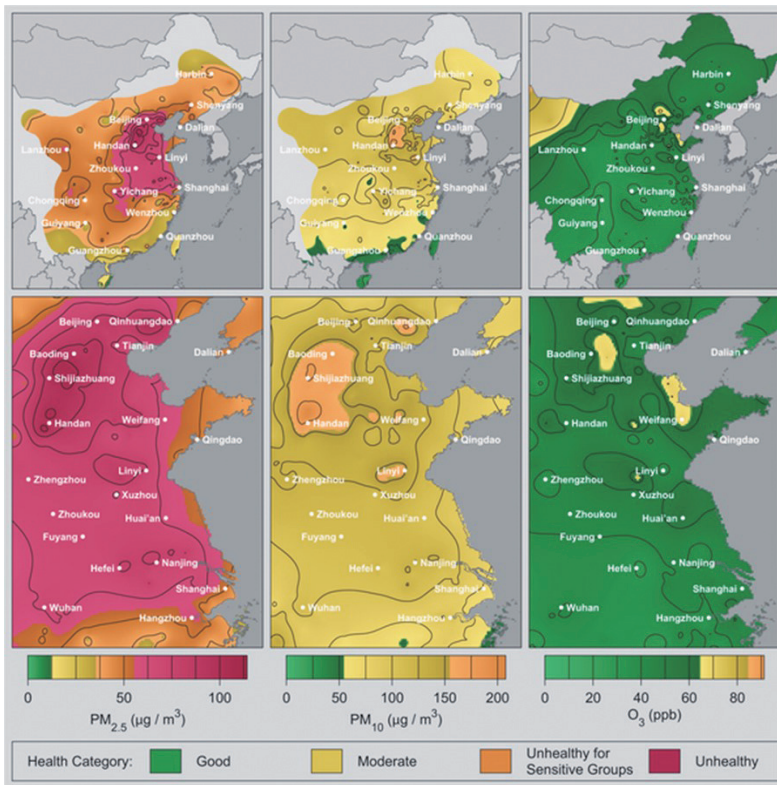


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One of the major causes of China’s air pollution is yellow dust. Measured by Environmental Protection Agency (“EPA”) standard of Particulate Matter (“PM”)

2.5 and 10,⁵ it is mixture of Chinese and Mongolian desert sand, along with harmful pollutants and greenhouse gases (“GHG”) such as sulfur dioxide and nitrogen oxide.⁶ On top of that, yellow dust contains heavy base metals and ozone, which have negative consequences on the health of humans and other animal species.⁷ PM_{2.5}, a fine particle of 2.5 micrometers in diameter, is more harmful than PM₁₀ because it can reach lungs deeper when inhaled.⁸ The maps (Figure 2) show the average pollutant concentration of yellow dust.

Figure 2: Maps of Average Pollutant Concentration of PM 2.5, PM 10, and O3 for Eastern China (top) and the Beijing to Shanghai Corridor (bottom).⁹



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Not surprisingly, yellow dust is a source of significant health, environment and economic injuries. In 2011, PM 2.5 concentration in Jingjinji (Beijing-Tianjin-

Hebei) region of China caused some 9,900 premature deaths, and almost 70,000 outpatient visits and hospitalization.¹⁰ Apart from the public health risks, there is also economic loss. The Chinese Academy of Environmental Planning estimated that the cost of environmental damage in China had risen to 6.5 percent of China's GDP by 2015 annually.¹¹ The smog-filled cities have also been reported to negatively affect tourism.¹²

The Chinese government began to recognize the air pollution as a major state crisis from 2013.¹³ This change of an attitude toward carbon and GHG emissions was prevalent in the 2015 Paris Agreement. China, unlike how it was in Copenhagen seven years ago, undertook a surprisingly radical climate change policies and programs.¹⁴ The final submission of China's new global climate agreement to the Intended Nationally Determined Contributions ("INDC") included:

- Peaking carbon dioxide emissions by 2030 (or sooner);
- Lowering carbon dioxide intensity (carbon dioxide emissions per unit of GDtP) by 60 to 65 percent from the 2005 level by 2030;
- Increasing the share of non-fossil fuels in primary energy consumption to around 20 percent; and
- Introducing national carbon cap-and-trade program in 2017.¹⁵

In addition, these agreements were re-confirmed by former President Obama and President Xi Jinping by the 2015 the US-China Joint Presidential Statement on Climate Change.¹⁶

On June 1, 2017, China's future role in lowering carbon and GHG emissions became more vital due to President Trump's decision to withdraw the US from the Paris Agreement.¹⁷ After the withdrawal announcement of the US, leaders in China, Europe, and India all agreed that they would uphold the Paris Agreement and carry on tackling global warming without the US¹⁸ Specifically, China and the EU held summit in Brussels on June 2 and 3, 2017, agreeing to help developing countries reducing carbon footprint.¹⁹ Without the US, China will most likely fill the leadership vacuum in international climate change accords.²⁰

Consequently, China, despite the skepticism of whether it will 'truly' work on addressing climate change, seems to develop a fundamental change in political stance on climate change and the environment.²¹ The 2015 revision of Atmospheric

Pollution Prevention and Control Law (“APPCL”) under the 13th Five Year Plan already reflects a significant regulation development from its previous version of 2000. Consequently, this new environmental regulation update will affect the American Direct Investment (“ADI”) in China.

ADI is an American business enterprise controlling ownership in Chinese entity, through management plans such as joint venture or transfer of technology. From 2000 to 2014, ADI in China increased drastically, which were valued at approximately USD 65.77 billion in 2014.²² This number represents about two percent of the US overseas investment, amounted to USD 4.92 trillion in 2014.²³ Nonetheless, experts state that the recent US-China Bilateral Investment Treaty (“BIT”) could potentially increase American investment in China.²⁴ After all, easier access to more industrial sectors and better protection of intellectual property rights in China will be more beneficial to ADI firms.²⁵

The potential increase of ADI in China is the reason why China’s new environmental regulations should be closely assessed. Estimating the impact of the new regulation and its requirements, such as the mandatory air pollutant disclosure requirement, can be a crucial factor in determining ADI’s future trend in China. American entity that heavily emits GHG may decide not to invest in China. Instead, it would stay in US, because both Federal and state governments generally demand voluntary disclosure of the entity’s environmental audit results. Unlike China, voluntarily disclosed audit results are kept confidential in America. Analyzing new Chinese environmental regulations and their potential impact on ADI will provide a valuable insight to economic development in both countries.

This research aims to examine and predict how China’s updated domestic air pollution regulations under the 13th Five Year Plan (2016-20), which reflect China’s new environmental goals, will affect ADI in China. This article is composed of four parts including Introduction and Conclusion. Part two will survey potential changes in the ADI contract that may reflect more stringent regulation requirements of 2015 APPCL and Environmental Protection Law (“EPL”). The new ADI contract should include changes in confidentiality, limited liability, and indemnity agreements. Part three will then discuss how changes in the ADI contract due to stringent air pollution regulations may affect the future ADI trend in China. Based on previous data under the 11th and 12th Five Year Plans, this article predicts that the ADI trend will not have a significant downturn, despite the mandatory

public information disclosure requirement. Nonetheless, more data will be required to make a clear determination of the ADI trend in the future.

2. The Modification of the ADI Contract Agreements under the 2015 APPCL and EPL

A. The Update on China's Domestic Air Pollution Regulations under the 2015 APPCL and EPL

China is changing. After expressing explicit climate change goals that are expected to be achieved in years to come, the first step China undertook was to modify and update its existing foreign investment and environmental regulations.

In 2015 revision of “Guideline Catalogue for Foreign Investment,” the Chinese central government listed FDI categories that are encouraged, restricted, or prohibited in China.²⁶ Sectors under the ‘encouraged’ category include green technology, energy conservation, and pollution control.²⁷ In contrast, several sectors under the ‘restricted’ category limit the FDI to joint ventures such as for rare earth smelting.²⁸ Because American corporations investing in China vary widely, from green technology start-ups to heavy industrial enterprises, the tightened air pollution regulations under the 13th Five Year Plan will be important to acknowledge.²⁹

There are two noticeable developments in 2015 revision of APPCL and EPL, which are part of 13th Five Year Plan. First, the public disclosure of pollution discharge information became mandatory for several new industries. According to the 2015 APPCL, these industries now include non-mobile vehicle manufacturers and pollutant discharging entities under intensified supervision.³⁰ Moreover, under the 2015 EPL, any enterprise preparing Environment Impact Assessment (“EIA”) for construction projects must publicly disclose such documents and solicit public opinion.³¹ This is not far short of disclosing almost every construction project with environmental implications under public scrutiny.³² Not only that, the 2015 EPL goes even further by stating that any enterprise which violate EPL and other environmental regulations may be required to publicly release such violation.³³

This development reflected in the 2015 APPCL and EPL is significant for ADI firms, because China’s previous environmental regulations with public disclosure clauses mostly consisted of ‘voluntary’ disclosures, just like the US

environmental regulations. China's Open Information Law, as well as the Measures for the Disclosure of Environmental Information Act of 2008 merely encouraged multinational corporations to disclose information such as heavy pollutant emissions.³⁴ In fact, the 2000 APPCL does not contain a single public disclosure requirement for private entities, both in terms of mandatory and voluntary disclosures.³⁵ Thus, the new information disclosure requirements under the 13th Five Year Plan environmental regulations will certainly have a noticeable impact on the ADI agreements.

Second, the 2015 APPCL seems to be developing toward non-compliance liability rule with narrower scope, departing from the 2000 APPCL's broad strict liability rule. Consequently, even though the new regulations impose harsher penalties for wider variety of industries for transgression than the past,³⁶ ADI may protect itself more effectively through well-drafted limited liability and confidential clauses. *E.g.*, an ADI firm can now list certain types of transgression in its limited liability clause, rather than listing every possible issue that may arise under the strict liability rule. As China imposes the burden of proving environmental liability to the accused polluter, non-compliance liability rule may enable an ADI firm to predict penalties and expand its business without fearing the minute details of its potential liability issues. In short, narrower scope of liability will aid the ADI trend in China.³⁷

On the whole, these new regulations "backed with more teeth" will help China to achieve its climate change goals by 2030. At the same time, they will have practical implications on ADI.³⁸ Even though the actual impact on ADI will depend on its nature and extent of operations in China, business costs of causing serious atmospheric pollution or non-compliance will significantly increase.³⁹ In addition, due to vague wording of public information disclosure requirements, ADI may potentially bear the risk of exposing trade secrets. Therefore, in order to minimize the risk of exposing trade secrets and bearing unwarranted liability, ADI will have to carefully draft contractual agreements with the responsible government entity or transacting party in China.

B. The ADI Contract Agreements with the Chinese Government

1. Confidentiality Agreement

The most notable development of environmental regulations under China's 13th

Five Year Plan is mandatory public information disclosure requirements. In the past, Chinese environmental law was long understood as little more than a paper tiger, since local officials who often have political or economic ties to violators failed to impose meaningful enforcement.⁴⁰ Even if fine was levied, it could easily be less than the cost of compliance.⁴¹

Ever since the 2015 Paris Agreement, however, China, being set on achieving new, ambitious environmental goals, understandably instated mandatory information disclosure programs in order to improve its domestic environmental performances.⁴² The progress indicates that local and central governments are beginning to impose stricter penalties to deter environmental violators.⁴³

This public disclosure programs may increase an ADI firm's liability.⁴⁴ There are two potential risks. First, because the disclosure requirements' wording in APPCL or EPL is quite broad, it is unclear to what extent the ADI firm must disclose its business information. Article 18 of the 2015 APPCL states that building projects with potential atmospheric impact must conduct an EIA and publicly publish the results.⁴⁵ The 2015 APPCL, however, does not specify the type and amount of information that should be included in the new EIA under the 13th Five Year Plan.

In addition, even though Articles 53 and 62 of the 2015 EPL provide that any entity's violation of the law may be disclosed to the public, the lack of specificity of violation's type and severity, and the language 'may' make the disclosure requirements quite vague.⁴⁶ Disclosing business information that the 2015 EPL categorizes as new restriction may make an ADI firm susceptible for fines, or even criminal liability.⁴⁷

Second, ADI firms may face risk of exposing trade or commercial secrets through the disclosure requirements. This particular problem also arises because the wording of the new environmental regulations is vague. Out of 129 Articles in the 2015 APPCL, only Article 29 briefly mentions the confidentiality issue by stating: "Inspecting departments or institutions ... shall keep entities' trade secrets confidential under inspection."⁴⁸ Nowhere does the 2015 APPCL specify what would happen to the trade secret, if enterprises were required to publicly disclose corporate information including trade secret, such as operation of pollution control facilities. Similarly, as the 2015 EPL only mentions confidentiality issue in Articles 24 and 56, EIA will be publicly disclosed except state or commercial secret.⁴⁹

Why does the new disclosure requirement's vagueness become a problem for ADI, then? The main reason is that the Chinese government is extremely decentralized.⁵⁰ China has accomplished several market reforms during the past years, one of which was the central government's passing a great deal of power to provincial and local governments.⁵¹ This decentralization and disaggregation particularly stands out in energy sector, especially in the coal industry.⁵² Since 1998, both the central government and local governments have retained responsibility for drafting independent policy and regulations.⁵³ Thus, the power has seeped into different range of parties, without clear rules and procedures to govern such decentralization.⁵⁴

The 2015 APPCL illustrates this reality by stating multiple times that the local government will determine specific restrictions. These restrictions include information such as types of pollutants, the total discharge volume control indicators, and the concentration of atmospheric pollutants emitted by an entity.⁵⁵

Consequently, ADI corporations in different provinces of China will have to adjust its contract, particularly confidentiality agreement, based not only on the central government's air pollution regulation, but also on local government's specific restrictions. This means that facilities and factories owned by one corporation, and yet located in different provinces, will have to retain separate confidentiality agreements depending on each province's requirements and restrictions. An ADI entity should draft the confidentiality agreement clearly and precisely in order to protect itself from the broad language of China's new information disclosure requirement.

So, what should be included in ADI's confidentiality agreements under the 13th Five Year Plan? Since the public disclosure requirement is new to China's environmental regulations, several elements including trade secret and sensitive business information protection will have to be addressed.

One possible way to examine the substantive elements of confidentiality agreement is to look at the US Environmental Audit Program. Unlike the 13th Five Year Plan, both federal and state environment agencies in the US only allow voluntary disclosure of entities' comprehensive compliance performances.⁵⁶ Nonetheless, if an entity wants to protect certain sensitive information from public exposure, it may draft confidentiality agreement in written format.⁵⁷ This written agreement generally reserves rights of reviewing and discussing sensitive

information between top-level facility personnel and responsible government agency.⁵⁸ It also generally includes attorney-client privileges, as well as self-evaluation privilege.⁵⁹

Likewise, ADI firms in China may follow and replicate confidentiality agreements drafted in compliance to the US Environmental Audit Program. The confidentiality agreement may include, but not limited to:

- Specific type and list of sensitive information or practice, including trade secrets under the central and local government regulation requirements;
- The protection level of the sensitive information from public exposure;
- Any protection privilege regarding sensitive information;
- Attorney-client privilege; or
- Self-evaluation privilege.

Because the 2015 APPCL and EPL require a mandatory disclosure of environmental information, the reporting ADI firm should carefully restrict the confidentiality scope in order to minimize the exposure risk and liability. The properly structured confidentiality agreement will effectively address ADI firm's disclosure concerns.

2. Limited Liability Agreement

In addition to mandatory public information disclosure requirement, the 2015 APPCL and EPL made few minor changes regarding liability rule from their previous versions. One of the most notable trends is that China may be progressing toward non-compliance liability rule with narrower scope, rather than broad strict liability rule. This development, if confirmed by future local and central government regulations, may allow ADI firms to draft limited liability clauses specifically targeting the 2015 APPCL's compulsory violation clauses.⁶⁰

Traditionally, China regulated environmental damage under a broad strict liability rule.⁶¹ The evidence was distinguishable from the fact that the 1989 EPL and the 2009 Tort Liability Rule ("TLL"), mainly covering China's environmental liability, did not require a violation of specific legal regulation for liability.⁶² Article 41, Section 1 of the 1989 EPL stated: "A unit that has caused an environmental pollution hazard shall have the obligation to eliminate it and make compensation to the unit or individual that suffered direct losses."⁶³ Consequently, even though another environmental liability regulation, General Principles of Civil Law of 1986

(“GPCL”), opted non-compliance liability rule,⁶⁴ the general consensus for ADI was to follow the 1989 EPL and TLL’s strict liability rule.⁶⁵

Yet, the 2015 APPCL reveals slight inclination towards more restricted non-compliance liability rule, with promise of stronger enforcement.⁶⁶ First, Article 7 of the 2015 APPCL states: “Enterprises ... shall *assume* legal responsibility for the damage they have caused.”⁶⁷ Assuming responsibility, in contrast to having a definite obligation for environmental damage, may leave room for ADI firm to limit its liability by drafting a narrower limited liability and indemnity agreements.

Second, Article 30 of the 2015 APPCL illustrates specific situations in which the Chinese government may seize an ADI enterprise’s relevant facilities and assets.⁶⁸ Under this provision, the Chinese government may seize an enterprise’s relevant facilities, when the enterprise violates any law or regulation, and either (1) causes serious atmospheric pollution, or (2) destroys or conceals relevant evidence.⁶⁹ Violating law is a compulsory element of this penalty, making Article 30 a non-compliance liability rule.

The 2015 APPCL thus differs from the 1989 EPL, which imposed enterprise’s liability for a broad “environmental pollution hazard.”⁷⁰ It also differs from the 2000 APPCL, which did not address specific situations in which the Chinese government may detain a non-complying enterprise’s relevant facilities. In short, the 2015 APPCL may not only limit the strict liability rule’s broad scope, but also impose narrower non-compliance rule.

This is certainly not to imply that the Chinese government changed its position a 180 degrees regarding strict liability rule. ADI firms should note that Article 6 of the 2015 EPL continues to reflect the traditional strict liability rule, by stating: “Enterprise ... shall bear liability for damage caused by [the enterprise] in accordance with the law.”⁷¹ The 2015 EPL also addresses in Article 64 that anyone causing environmental damage shall bear tort liability under the 2009 TLL.⁷² Because the 2009 TLL opts for strict liability rule, ADI firms, at least in environmental liability for damages other than air pollution, should prepare the contract agreements to reflect strict liability rule.

Nonetheless, if both the central government and local governments of China are indeed moving towards narrowed down non-compliance liability rule rather than strict liability rule for atmospheric pollution damage, ADI firms may breathe easier in the future when drafting limited liability agreements. After all, business entities

prefer narrower scope of liability, since it gives them more flexibility in operating the business within the legal boundary.

An ADI firm, *e.g.*, may discuss with respective local Chinese government about what emission levels constitute as “serious atmospheric pollution” under the regulation, and include such emission levels when drafting limited liability agreement. Each emission level of “serious atmospheric pollution” may correspond to respective penalties and liabilities, from monetary fees to voluntary surrender of relevant facilities.⁷³ Naturally, the ADI firm will be able to avoid an unforeseen liability through the limited liability agreement and categorize potential consequences of transgression in preset formula. Avoiding an unforeseen liability from vague and broad language of strict liability rule will be thus beneficial to the American investment in China.⁷⁴

3. Indemnity Agreement

Having established the benefit of the 13th Five Year Plan’s potential non-compliance liability rule, an ADI firm’s next step will be drafting an indemnity agreement that addresses causation issue. In China, under Article 66 of the 2009 TLL, the burden of proving environmental liability shifts to the accused polluter.⁷⁵ Consequently, the accused polluter must bear the burden of proving defense, including indemnification or mitigation of liability.⁷⁶ This means that the accused polluter bears the burden to prove a lack of causation between its activity and damages.⁷⁷ The damages may include: (1) personal injury; (2) property damage; (3) emergency response costs; (4) investigation and assessments costs; or (5) restoration costs.⁷⁸

Proving the causation link may present complication for the accused polluter, depending on the two aforementioned types of liability rules. Under non-compliance liability rule, the polluter’s liable activity will likely be transgression, and be thus penalized. Drafting indemnity agreement under non-compliance liability rule will be relatively straightforward, because an ADI firm may indemnify itself from harm that is not caused by its transgression.

In contrast, under strict liability rule, proving causation link becomes more difficult, since the accused polluter may not be able to show whether its activity directly caused the pollution.⁷⁹ As strict liability rule largely remains regulating Chinese air pollution sector, an ADI firm should prepare an agreement that will

indemnify itself from situations in which the firm can prove its disassociation with the harm.

Fortunately, Chinese anti-pollution regulations provide that no liability is incurred if the accused polluter can prove its disassociation with the harm.⁸⁰ Such situations include: (1) unavoidable natural disasters (*force majeure*) and (2) third party at fault.⁸¹ Indemnifying the accused polluter under these situations is in line with General Principles of Civil Law 1986 and the 2009 TLL.⁸²

In addition, an ADI firm should also protect itself in situations where it may be partially responsible for the damage. Even though Chinese atmospheric pollution regulations do not provide specific examples of indemnification language, China's Marine Environmental Protection Law ("MEPL") and the Regulation on the Vessel-Induced Oil Pollution Damage Fund (hereinafter Compensation Fund) illustrate similar examples.⁸³ The Compensation Fund is contributed by all oil cargo carrying shipowners operating in Chinese sea. It can be used to indemnify the accused shipowner when: (1) the total amount of compensation exceeds the shipowner's limitation of liability; (2) the legal defenses are available; (3) the shipowner and his/her insurer/guarantor cannot provide full compensation; and (4) liable ships cannot be identified.⁸⁴ The upper limit of compensation for one accident is set at RMB 30 million.⁸⁵

Likewise, ADI firms that partially generate atmospheric pollution may follow oil vessel industry and draft an indemnity agreement accordingly. This is not to say that ADI firms that emit GHG should all contribute to atmospheric pollution fund. However, an ADI firm can take caution by having an insurance that may indemnify the firm, if the ADI firm can prove that the total amount of compensation exceeds its liability. Because multiple sources contribute to atmospheric pollution, an ADI firm may also indemnify itself if it can show that the firm or its agency is not the major source of local atmospheric pollution.

An ADI firm may also draft an indemnity agreement in private transactions. Article 67 of the 2009 TLL holds that, in the case of multiple polluters, damages will be apportioned based on the type of pollutants and the volume of emissions.⁸⁶ Under this rule, China applies a joint and several liability rule, allowing private parties to negotiate indemnification of environmental liability on contractual basis.⁸⁷ Thus, an ADI firm that is transferring an asset such as GHG emitting facility to China may indemnify itself through representations and warranties.⁸⁸ The warranties

may include: (1) past compliance with environmental regulations; (2) no significant air pollution, or risk of air pollutant emissions; or (3) no existing or potential claims in relations to an environmental matter.⁸⁹ After the warranties expire, an ADI firm should be able to indemnify itself from future environmental suits based on its previous activities.

Preparing a clear indemnity clause under the 13th Five Year Plan is important for three reasons. First, Article 122 of the 2015 APPCL differentiates the penalties between “directly liable [entity] in charge and other directly liable [entities]” and a mere violator of law.⁹⁰ The penalty for “directly liable [entity]” may be equal to 50 percent of the entity’s *income* of the previous year.⁹¹ This is a significant change from Article 61 of the 2000 APPCL, which limited directly liable party’s penalty to 50 percent of direct *economic loss* due to the pollution.⁹² If an accused ADI firm can prove that the atmospheric pollution damage is not a direct consequence of its action, it may indemnify its liability, or at least minimize the penalty according to the agreement. Naturally, the ‘direct causation’ should exclude unforeseen third party intervention.

Second, the updated APPCL and EPL expanded the potential liable industries for atmospheric pollution. The new regulations expanded the types of industries that the Chinese government will impose environmental restrictions.⁹³ Chapter IV of the 2015 APPCL lists these industries including entities that discharge organic pollutants and non-road mobile machinery manufacturers.⁹⁴

In addition, compliance requirement lists diversified. *E.g.*, the ADI firms that discharge toxic and hazardous atmospheric pollutants listed in State Council directory will now have to: (1) establish an environmental risk early warning system according to relevant state provisions; (2) conduct regular monitoring over discharging outlets; and (3) eliminate hidden environmental safety problems, etc.⁹⁵ Under non-compliance liability rule, these elements will be particularly important to be included in ADI contract, since the inclusion may indemnify the ADI firm if non-compliance of particular factor does not lead to serious atmospheric pollution. In short, the stakes are much higher for wider range of ADI industries under the new regulations.

Third, Article 58 of the 2015 EPL allows environmental public interest litigation (“EPIL”), which was strictly limited in number and scale previously.⁹⁶ Under the 13th Five Year Plan, about seven hundreds’ NGOs now have the right to initiate

EPIL cases against foreign private enterprises, including ADI firms.⁹⁷ This new policy was adapted to raise awareness and compel private firms to comply with new environmental laws. As a consequence, ADI firms will have to prepare an indemnity agreement that will cover a wide range of air pollution liabilities against the potential EPIL cases.

In summary, these developments in the 13th Five Year Plan's environmental regulations will compel ADI firms to strengthen indemnification agreement. Because China demands the accused polluter to prove liability and defense regarding the damage, ADI firms will have to reflect the new regulations in order to minimize the risk of unforeseen liability.

3. The Impact of the ADI Contract Agreement's Modifications on Future ADI Trend

In the past two decades, a multiple surge of foreign investments, including ADI, knocked on China's door. The greater mobility of capital, coupled with globalization and China's removal of financial and environmental restrictions, resulted in enormous economic development in the country. Accordingly, ADI firms, including corporations that traditionally relied on natural resource use and extraction, as well as mineral and fuel production, flew into China's natural resource sectors. As a consequence, the fast economic growths in China also contributed to accelerated environmental degradation.

This phenomenon fueled the debate around the 'Pollution Havens' hypothesis ("PHH"). PHH states that companies will move their operations to countries with less stringent environmental regulations in order to take advantage of such regulations.⁹⁸ In addition, countries may purposely undervalue their environment in order to attract new investment.⁹⁹ Either way, PHH concludes that the parasitic relationship between the country and companies leads to environmental degradation and excessive level of pollution.¹⁰⁰

Despite earlier empirical studies pointed to PHH's validity, however, several new studies suggest that there is insufficient connection between lenient environmental policy and concentrated foreign investment.¹⁰¹ A research was conducted on different air pollution regulations between provinces in China, examining whether

there is higher foreign investment concentration in provinces with more lenient regulations.¹⁰² This study suggested that generally there is no significant evidence of PHH behavior, except anomaly of highly polluting industry that preferred provinces with low environmental levy.¹⁰³ Studies done by Eskeland and Harrison, as well as Javorcik and Wei also suggested environmental stringency may itself be endogenous, blurring the relationship between stringency and foreign investment's location choice.¹⁰⁴

So if PHH was potentially proven void, would China's strengthened air pollution regulation have negative impact on the future ADI trend through modification of ADI contracts? The answer is likely to be no, i.e., the 13th Five Year Plan's stringency will not have negative impact on the future ADI trend in China. There are five main reasons supporting this position.

First, if an ADI firm drafts a precise confidentiality agreement to protect its commercial secrets, environmental disclosure requirement may be beneficial to ADI in the long run. By examining Australian companies' disclosure of environmental information in their annual reports, Gozali *et al.* illustrated economic consequence of such voluntary disclosure.¹⁰⁵ It concluded that companies which disclosed positive environmental information performed significantly better in the market than companies that disclose negative environmental information.¹⁰⁶

This result can be attributed to a corporate (1) acquiring positive reputation and feedback from local population and (2) attracting investors who rely on the disclosed information.¹⁰⁷ The existing evidence shows that investors and financial analysts find environmental information relevant and sufficiently reliable to be incorporated into the financial assessment of the firm.¹⁰⁸ Thus, if an ADI firm maintains a standard pollutant emission level and disclose such information to the extent of not hindering commercial secrets, the firm may in fact gain a better market response than the past when it did not disclose any information.

Second, if the new air pollution regulation is indeed moving towards non-compliance liability rule, then this narrower scope of liability will aid ADI firms to locate in China with less unforeseen risks. For the past decade, ADI firms succeeded in China under the strict liability rule, even though ADI firms faced uncertain environmental liabilities from government bureaucracy and a burden of proving causation link between their activity and the harm. In fact, any corporate activity was potentially liable for causing the pollution. Compared to strict liability

rule, however, ADI firms will be able to acknowledge and prepare for transgression liability under a non-compliance liability rule. Therefore, it is likely that ADI firms will potentially gain greater success under the non-compliance liability rule, taking advantage of narrower and more restricted liability risk.

Third, China's new environmental policy will support green-technology industry, including energy conservation, environmental protection, and biotechnology.¹⁰⁹ Dedicated to its serious climate improvement action plan, the Chinese government declared to spend up to USD 2.5 trillion over the next 15 years on clean energy project.¹¹⁰ In addition, China is also expecting to provide a 'lift-off' to promising alternative energy firms, which may aid ADI firms receiving beneficial contractual agreements from local Chinese agency.¹¹¹ This demand for alternative energy source and green technology will benefit Western investment in China, including ADI firms that are "quite happy about China moving on standards."¹¹²

Fourth, China's stringent environmental regulation will not have a significant impact on ADI trend, because large ADI firms already adhere to the OECD environmental standards.¹¹³ Multinational firms operate under close scrutiny from consumers and environmental NGOs in the OECD economies.¹¹⁴ Consequently, large ADI firms in energy sector will generally not go through a huge change under the new stringent requirement, thereby enabling them to remain stable in China for the next five years.

Fifth, pollution control is not a critical cost factor for most private firms, including ADI firms in China. Studies in both high- and low- income countries suggest that compliance costs are surprisingly small, so that these would not impose high burden on business firms.¹¹⁵ In fact, firms in developing countries such as China frequently bear even lower compliance costs, because of the labor and materials used for pollution control are less costly than in the Western economies.¹¹⁶ Moreover, even if the 2015 APPCL and EPL generate higher compliance costs in the next decade, these stringent regulation requirements will in fact develop clean technologies that will be available at incremental costs.¹¹⁷ Therefore, higher pollution control costs would not generate any significant negative impact on ADI.

4. Conclusion

The severe air pollution has finally driven China to adopt new, ambitious environmental goals that are expected to be achieved at both domestic and international levels. Accordingly, China drafted stringent environmental regulations in order to meet these goals under the 13th Five Year Plan. The 2015 APPCL and EPL reflect China's new environmental stance, which will ultimately affect ADI industries in the country.

Three most crucial developments of China's new air pollution regulations are: (1) mandatory air pollutant disclosure requirement; (2) shift towards non-compliance liability rule; and (3) increased penalty for transgression against wider range of industries. These developments will push ADI firms in China to modify their contractual agreements in order to limit its liability and protect trade secrets.

Yet, despite the changes in China's new environmental regulations and their unavoidable impact on ADI contract, future ADI trend would probably not have a significant downturn. There are several reasons behind this hypothesis. Foremost, disclosing environmental information is positively correlated with entity's good reputation and attraction of investors. In fact, American corporations with positive environmental practice voluntarily choose to disclose environmental information to the public. Since ADI firms already adhere to the OECD's environmental standard, disclosing information may be beneficial for ADI firms in the long run.

In addition, ADI firms will be less likely to face unforeseen risks, if the 2015 APPCL is truly progressing towards non-compliance liability rule. It is also important to note that China is set to support green technology industry, both foreign and domestic owned, for the next 15 years. Thus, even though ADI firms may bear the burden of negotiating the contract clauses with the central government and local governments of China, such negotiations would not generate a significant negative impact on the future ADI trend.

These are uncertain predictions, of course. Because the 13th Five Year Plan has been recently adopted, more data and statistical analysis will be required in order to make a clear determination of ADI contract modification and its impact on economic trend. The fact that public-interest litigations, brought by NGOs and regular Chinese citizens, are encouraged under the new EPL may also affect ADI trend. Nonetheless, China's new environmental stance and regulations will likely

to assert positive influence on both ADI trend and China's air pollution for years to come.

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