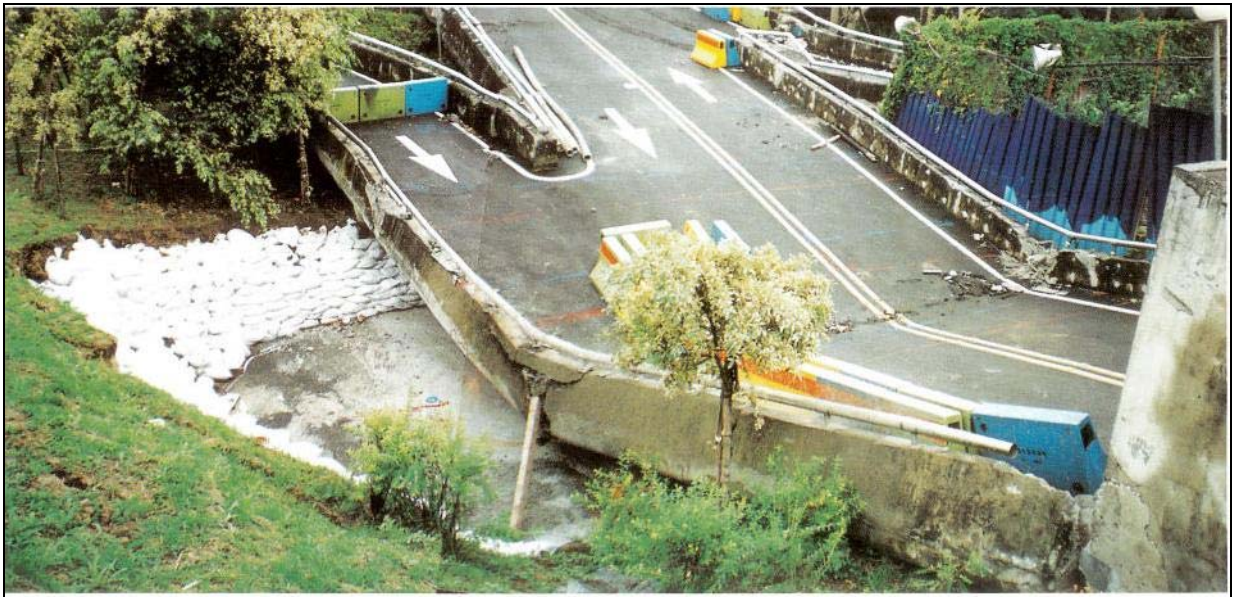


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CONTINGENT BI IN ENGINEERING INSURANCE RELEVANT RISK & UNDERWRITING CONSIDERATIONS TO IMPROVE CLARITY AND ACHIEVE BEST PRACTICE STANDARDS



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List of abbreviations

ALOP	Advance Loss of Profit
BI	Business Interruption
CAR	Contractors' All Risks
CBI	Contingent Business Interruption
DSU	Delay in Start Up
EAR	Erection All Risks
MB	Machinery Breakdown
SRCC	Strike, Riot and Civil Commotion
TPL	Third Party Liability

1. Introduction

Every time an underwriter is presented with a new risk or with an extension to an existing one, his/her major concern is to be sure to have available everything he/she needs to make an appropriate calculation of the premium to cover the risk, to estimate the financial exposure of his/her company whilst insuring that risk and to control the risk during the period of insurance.

To achieve all these goals he/she needs to evaluate the probability of an insured loss and the extent of the maximum probable loss. He/she must also be able during the policy period to monitor the risk exposure whilst the risk he/she accepted to insure is covered by the Policy.

His/her assessment requires therefore various information including: the location of the item to be insured and its exposure to natural events and to other perils, the type of activity undertaken, the presence of adequate loss prevention measures including fire fighting facilities, the loss history of the Insured and the experience that the Insured has in the type of works or activity.

If ALOP or Business Interruption extensions are required, the underwriter will also need to know which elements can have the greatest influence on the period of interruption. He/she would also need to clarify whether the Insured will be in the position to take action to minimise any interruption.

In accordance with normal insurance practice the underwriter would expect that all the above information will be disclosed to him/her in a genuine way without omitting elements that might otherwise prejudice the process of risk assessment.

The control of the risk during the period of insurance also requires that in the event of a loss the insured notifies the Insurance Company and takes all necessary measures to minimise the loss, being thereafter prepared to cooperate with the appointed adjuster in providing all information needed. Moreover during the insurance the underwriter would expect to be informed of any material change in the risk and would also expect the full cooperation of the Insured in the event he/she might decide that a site visit is required to ascertain the status and the exposure of the insured item.

These are basic elements of insurance that most of the time we take for granted but are we sure that in the case of Contingent Business Interruption Insurance all of these elements are as they are supposed to be?

With this paper we consider briefly Contingent Business Interruption Insurance, commenting on the most common types of extensions applied at present by the Market. We would like then to highlight some of the problems that an underwriter can face, when accepting these types of extensions, in terms of assessment of the risk and of the exposure that an Insurer can face in the event that some basic elements are not kept under control during the underwriting process.

These considerations allow us to draw together some ideas for best practice standards.

The content of the clauses normally used on the market will be mentioned without presenting specific wordings.

2. What is Contingent Business Interruption Insurance?

All types of industrial activities, in an existing industrial location or in the construction or erection phase at a site, depend on how the location is connected with its environment and which interdependencies between the insured activity and its environment exist.

These connections/interdependencies can be identified as:

- Physical: the physical possibility to have access to the production activity or to the site (e.g. access through roads, harbours, airports);
- Supplying of components/parts : supplying of critical elements required by the Insured for carrying out the erection or construction at site or for the production activity;
- Supplying of utilities: supplying of all utilities needed to carry out the activity insured (electricity, water, gas, communications);
- Legal: Effect of orders issued by local authorities;
- Other possible elements imposing limitations on the activity insured.

When an Insurer extends a CAR/EAR or a MB Policy to cover respectively ALOP or BI arising from material damages occurring to the Insured activity, he/she considers ALOP or BI losses originating from material damage to items insured under the material damage section of the Policy. Items insured are owned or controlled by the Insured.

The idea of CBI is to offer wider protection extending cover to ALOP/BI losses arising from accidents disrupting the connections between the Insured activity and the environment which it depends on.

The big difference with the standard type of cover provided by ALOP/BI is that CBI extends cover to interruptions arising from losses occurring to items not owned or controlled by the Insured and which are not covered originally under the material damage part of the underlying Policy.

CBI can apply to both Business Interruption and Advance Loss of Profit/Delay in Start Up, in the latter case being more commonly referred to as Contingent Delay in ALOP/DSU. In both cases we will refer to CBI. CBI can apply to both Property and Engineering Policies.

Typical CBI extensions included in the ALOP or BI Section of the Policy cover interruption arising from:

- losses occurring at suppliers' premises;
- the partial or total impossibility of access to the construction or production site due to a natural event or to a public authority's order;
- the shortage or disruption in the supply of facilities;
- the unavailability of an item not owned by the Insured that it is nevertheless essential for his/her activity.

3. Elements of Good Practice

In our approach to CBI we would like to highlight the elements of good practice during risk assessment and in preparing the insurance proposition as well as the basic elements on which the wording of each extension should be based, without presenting specific wordings.

We shall analyse good practice for each type of extension during the following phases:

- risk assessment;
- evaluation of Insurance Company exposure;
- control of the risk during the period of insurance;
- elements influencing loss settlement.

The importance of agreement between the Insured and the Insurer on a clear Clause for each extension will be mentioned. Grey areas might generate room for litigation in the event of a misunderstanding. The clearer the clause the easier the process of loss settlement!

4. Suppliers Extension

This is the most common type of CBI extension drawn to cover the consequences of a loss to one item needed by the Insured to carry out his/her activity, whilst this is located at the premises of the fabricator, manufacturer or supplier.

The item on which the activity of the Insured depends on can vary.



If we consider the case of CAR or EAR Policies this can be an important element for construction or erection works such as a Tunnel Boring Machine, in case of a tunnelling project, or a special machine for a large industrial plant, such as the cryogenic tower for a Liquid Natural Gas Plant.

In the case of an ALOP Policy it is immediately evident how important it is to ascertain the time required for the repair or replacement of such an element in the event of a major loss.

In the event of MB/BI Policies the critical element(s) might be vital materials, parts or components required by the production activity insured.

The high level of outsourcing that characterises industry nowadays makes it very difficult to evaluate the level of dependency of the insured activity upon other suppliers. The extent of a possible loss resulting from the lack of production at certain premises might be mitigated through the use of different suppliers. This depends on both the situation that most of the suppliers work at the most of their production and as well on the fact that sometimes there might not be other suppliers available in case the supplier affected by the loss is also the only holder of a patent relevant to new key technologies.

There are several elements to be considered to carry out a proper underwriting exercise in terms of risk assessment and pricing. These are required to assess the exposure that Insurers are asked to cover and the effect that a loss will have on the main insured activity.

Elements to be taken into consideration during the risk assessment are the following:

- who are the suppliers to be insured and what item will be produced in their premises;
- how critical is this item for the Insured's activity;
- what is its effect on the critical path in the event of a loss;
- what is the replacement time of this item in the event of a total loss;
- will any type of mitigation measures be applied in the event of a loss ;
- what type of perils is the underwriter prepared to cover;
- where are the premises to be insured;
- what is the exposure of the premises to natural events, fire and other perils insured;
- any type of information that might be available on the fire prevention measures installed at the premises;
- the possibility for an adjuster appointed by the Insurer to have access to the insured premises in the event of a loss.

In the drawing of the clause to be applied the underwriter shall take into account that the more generic the wording the wider the scope of cover.

Good practice shall therefore require that the underwriter:

a) shall have the control over which premises are to be covered

Therefore these must be declared to the underwriter and agreed by him/her before the occurrence of any loss;

This condition is particularly important in order to avoid the extension being widened through the supplying chain, beyond first tier suppliers. The requirement to have all

the premises declared and agreed allows the underwriter as well to be fully aware of the extent of the exposure.

b) shall state clearly in the clause what types of perils are covered

For “All Risks Policy” such as CAR or EAR, the Material Damages Section covers all type of loss not specifically excluded. Without restricting the list of covered perils to some events only the scope of cover of this extension would become very wide. Perils most frequently covered are the ones defined according to Flexa (Fire, lighting, explosion, aircraft) extended more frequently to other natural events such as: storm, tempest, flood and earthquake.

c) shall state the territorial limits for this extension

This might not be necessary if adequate control is imposed through the condition stated in a) requiring underwriter’s agreement for the inclusion of a new location. The location plays an important role in terms of risk exposure to natural events (flooding, earthquake, hurricanes, typhoons etc.) and on the level of loss prevention and maintenance that underwriters can expect to be applied.

d) might decide to apply a sub-limit of indemnity

In spite of the prudent approach set out in the previous items it might still be difficult to evaluate the additional exposure introduced by the inclusion of this extension. In this case the only way to determine the financial exposure of the Insurer can be through the use of a sub-limit of indemnity that can be stated as a sub-limit to the sum insured or as a percentage applicable to the sum insured under BI/ALOP.

e) must be sure to maintain the right to recover

Delay in supplying the item or the material object of the contract between the Insured and the supplier generates an indemnity that it is due to the Insured. The Insurers must be sure that any amount(s) that the Insured will receive from the supplier as a result of their delay or failure to deliver shall remain due to the Insurer in the same measure that the Insurer indemnified the Insured for the same loss.

f) must evaluate the possible accumulations

It is necessary to check whether more than one Insured is dependent on the same supplier. If we consider the case of gas turbines or wind generators for example, a fire occurring at the premises of an important supplier can delay the supplying of these items to several power stations or wind generator plants.

g) can evaluate the possibility of applying a specific time excess

For this type of extension it is unlikely that losses will be generated frequently. Therefore generally it is not necessary to apply a specific time excess to cut frequent losses.

In general, Insurers would like to be satisfied with the following:

- **Duty of Disclosure:** in accordance with the conditions stated above, Insurers can expect the Insured to inform them about the location of the premises and items thereby produced. Most likely the Insured will not be in the position to provide information about the exposure to insured perils of such premises and about their status and maintenance applied.
- **Possibility of carrying out a survey:** the underwriter cannot expect to have this right as there will be no contractual relationship between the owner of the premises and the Insurer unless the contract of supply between the owner of the premises and the Insured has a specific provision for this. It is difficult for Underwriters to ask for this condition taking particularly into account that most of the time contracts have already been in force for some time.
- **Prompt advice in the event of a loss / actions of loss minimisation:** in the event of a loss the owner of the premises will advise their Property or MB Insurer promptly. The notification of a loss affecting an item to be supplied will be given to the Insured with a time delay depending on the condition of the contract of supply or on the commercial relationship.
It is difficult to foresee what type of loss minimisation or recovery measures could be put in place to limit the extent of the loss to the item to be supplied or to restart the process of production as soon as possible.
Once again this might depend on the extent of liquidated damages agreed in the supply contract.
- **Loss adjusting process:** as per item b) the adjuster appointed by the Insurer will have no right of access to the supplier's premises unless this eventuality was provided for in the supply contract.

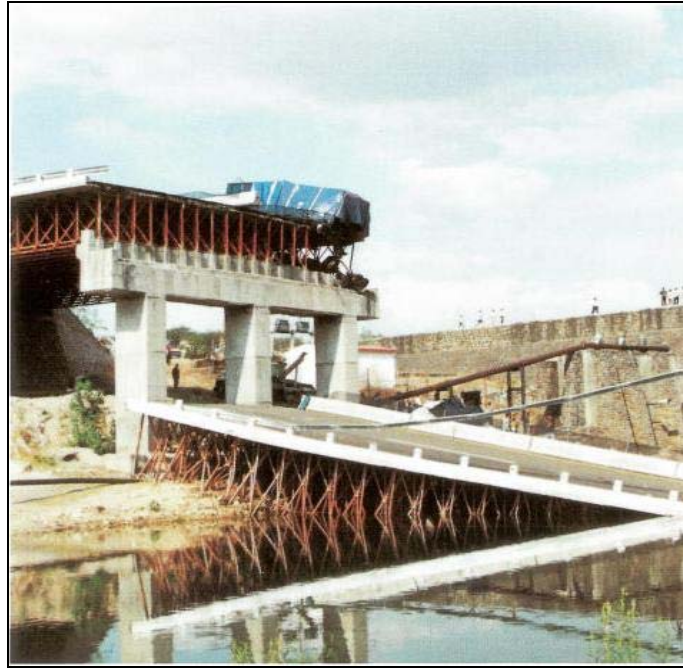
On the basis of the above situation the supply contracts have an important impact on the capacity of the Insurer to take an active part in controlling the situation after a loss has occurred.

As mentioned before, unfortunately in most cases the supply chain might be complex, involving premises located in different Countries. Moreover the contractual leverage from the Insurer's side is unlikely to allow the negotiation of conditions in the supply contracts.

5. Prevention of Access

This extension covers the interruption of the insured activity as a consequence of access restrictions to the insured site or location due to those property damages that prevent or hinder its accessibility.

Types of event leading to access restrictions are those connected to natural events, such as: earthquakes, hurricanes, typhoons, flooding, inundations, landslides, avalanches.



If we consider sites located in industrial countries we might be led to think that unless a major earthquake or hurricane occurs there will unlikely be an interruption. Nevertheless if we consider CAR or EAR Policies and sites located in remote areas reachable only through exposed access roads it is easy to imagine how these roads might be prone just in the event of heavy rain to major losses that might interrupt traffic for several days, if not weeks, particularly if they are the only route to reach this location.

Elements to be taken into consideration during the phase of risk assessment are the following:

- Location of the site and its accessibility;
- Status of access roads and of other critical structures such as bridges or viaducts;
- Exposure of access roads and other structures to flooding, landslide, avalanches;
- General exposure of the site area to natural events such as earthquake, hurricanes, typhoons;
- Alternative access available in the event of a major loss to the above mentioned roads or structures;
- Period of time required for the reconstruction of a critical part of a road or a structure that might be affected by a major loss;
- Who has responsibility for the maintenance and reconstruction of the access roads or structures;
- Existence of contractual agreements between the above mentioned entity and the Insured, which govern this type of event;
- History of previous cases of interruption and duration of the previous disruptions that have occurred;
- Extent of the Clause that the Underwriter is prepared to accept (i.e. territorial limit of application);
- Type of events that the Underwriter is prepared to cover;
- Possibility of carrying out a survey before attachment of cover;
- Possibility of an adjuster appointed by the Insurer having access to the roads or other structures which provide access to the site and to follow repairs.

Good practice shall therefore require that the Underwriter:

a) shall state the territorial limits for this extension:

The Underwriter shall clarify with the Insured the territorial limits within which the extension is intended to apply. In most cases these are defined as “vicinity”. This term remains undefined as it is left to the interpretation of the parties that might intend vicinity to mean a few kilometres or several kilometres.

The best possible solution would be to define on the map the boundaries of the area covered.

The Underwriter must take into account that depending on the definition of the area this extension might include, apart from roads, also airports or harbours that can be used for the shipping of goods or other items at the site.

b) shall state clearly in the clause what type of perils are covered;

For “All Risks” Policies such as CAR or EAR the Material Damages Section covers all type of losses not specifically excluded. Most of the time this extension refers to physical damages that would have been covered by the material damage section of the Policy if these properties were insured.

Without restricting the list of covered perils the scope of cover of this extension can become very wide. Apart from loss or damage due to natural events, cover includes cases of collapse of existing structures due to design, material and workmanship.

If the area covered might include an airport, cover for Terrorism needs careful consideration particularly for “All Risks” Policies and an appropriate time excess should be applied. It is worth remembering how wide was the impact of the 9/11 loss.

SRCC cover must be taken into account as well since a strike can prevent the access to the insured location for several weeks.

Depending on the exposure of the site the Underwriter might decide to limit cover to named perils only or to exclude some of the perils otherwise covered by the Material Damage Section.

c) might decide to apply a sub-limit of indemnity,

In the event that access to the area is difficult and extremely exposed the Underwriter can decide to set a sub-limit of indemnity to apply for this extension.

d) must evaluate the chances of pursuing a recovery

In this case there is no possibility to subrogate against the owner of the infrastructure that provides access to the site.

e) must evaluate the possible accumulation with other risks

There might be cases in which more than one insured location or site depends upon the same access. The Underwriter must check this possibility.

f) Must evaluate the possibility of applying a specific time excess

Depending on the condition of the infrastructure and on their exposure an Underwriter might feel that there is the possibility of frequent interruptions leading to an erosion of the time deductible stated for the BI/ALOP Section. In such a case it can be worth applying a specific time excess for each and every loss.

With regards to general insurance principles we comment as follows:

- **Duty of Disclosure:** the Insured should provide Insurers with enough detail about the access to the site or to the insured activity and its relevant exposure.
- **Possibility of undertaking a survey:** in this case there should be nothing impeding insurers' representative in carrying out a survey before the start of the Policy cover or during the period of insurance.
- **Prompt advice in the event of a loss / actions of loss minimisation:** in the event of a loss the Insured needs to inform the Insurer immediately. Loss minimisation might be difficult and depends on the extent of the loss.
- **Loss adjusting process:** the adjuster appointed by the Insurer should have access to damaged roads or structures. It will be important to be sure that he can also be involved in the monitoring of the progress of repairs.

6. Interruption by Civil Authority

In the previous item we considered the case of denial of access to a site or other location of the insured's activity as a result of an external loss or event.

There are cases in which the prevention of access can result from the action of a Civil Authority.

There might be different types of losses leading to this situation. We can think for example of the case of a loss covered under the machinery breakdown section or material damage section of the Policy following which a Civil Authority can decide to close the factory or the site for a certain period because there might be a danger for surrounding third parties. Another possibility is the case of the closure of the factory or the site as a consequence of a severe loss involving injuries or casualties. In this case the closure can be a consequence of the need to carry out a forensic investigation on the cause of the loss in accordance with local law.



The Underwriter has to take into account that some types of activity or projects can be opposed by local parties or associations that might influence public opinion or the press in the event of an important loss. Pressure might be brought to bear on the local authority to stop the activity. In these cases it might be difficult to estimate how long a closure can last.

Elements to be taken into consideration during the phase of risk assessment are the following:

- Exposure of third parties to the Insured activity;
- Possible effect that a major loss may have on third parties;
- Attitude of the inhabitants of the area to start legal action;
- Attitude of the local media in respect of the insured activity;
- Level of local bureaucracy.

Good practice therefore requires that the Underwriter:

a) shall state clearly which perils must produce the denial of access for cover to be triggered

It will be necessary to clarify which causes of Civil Authority action will trigger cover. This might be a consequence of losses covered under MB or Material Damage sections of CAR/EAR Policies. It can be also due to Third Party losses covered by another section of the Policy. It is nevertheless important that the Civil Authority action originates as a direct consequence of a loss covered by the Policy.

It is necessary to remember that in some cases denial of access to the insured activity as a consequence of a Civil Authority action can originate as a consequence of terrorism or epidemics.

Both these can have their origin far from the site and can lead to long periods of interruption in the business activities of the insured. They are nevertheless not associated with the cover given under the main section of the Policy.

b) shall state the territorial limits for which this extension can apply:

This might not be necessary if there are adequate definitions of cover under the previous item. In the event that there are some doubts that this might not be adequate it would be better to define the geographical limits.

c) shall state the type of Action required from a Civil Authority to trigger the extension:

There are different types of action such as orders, recommendations, etc. It is necessary to decide which is required to trigger cover under the extension.

d) might decide to apply a sub-limit or a deductible:

Depending on the type of activity involved and on the Country where the risk is located it might be necessary to evaluate a special time excess in order to cut frequent minor losses (in which case the most effective type of time excess is the one applicable for each and every loss).

Moreover in the event that available information does not provide the Underwriter with a detailed picture of the risk exposure it might be decided to apply a sub-limit in order to establish an exposure limit.

For general insurance matters we comment as follows:

- **Duty of Disclosure:** if it has been established that the origin of the Civil Authority action will be the consequence of a loss covered under one of the Policy Sections we can expect suitable disclosure to take place.
- **Possibility of carrying out a survey:** a survey will allow the Underwriter to evaluate elements of risk exposure connected with the insured activity.
- **Prompt advice in the event of a loss / actions of loss minimisation:** in the event of a loss, the Insured should be in the position to notify Insurers promptly. The Insured will also be in the position to advise the Insurer of the issue of an order or a recommendation from the local Civil Authority.

The Insured is unlikely to be able to control the period of suspension of works in the event of an official enquiry. They might be able to reduce the delay in cases where the suspension from local Civil Authority was imposed because of a real or feared danger to third parties. In this case prompt action in taking necessary measures supported by appropriate documentation might demonstrate to Authorities that the problem has been solved and the Authorities can authorise the restarting of the insured activities.

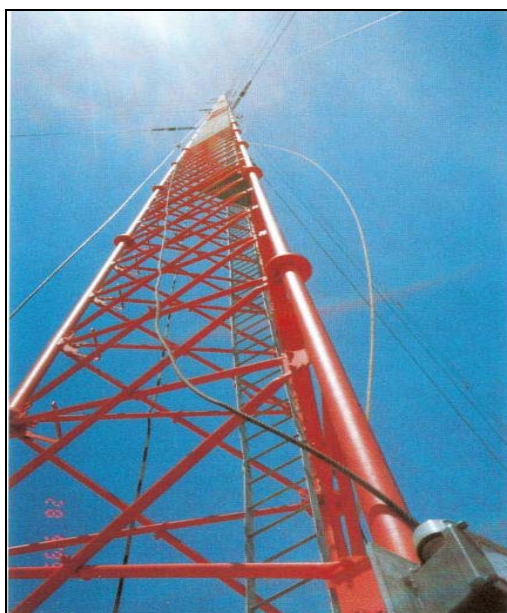
The greatest influence comes from the local law and procedures to be followed. Countries in which this type of process is governed by complex bureaucracy might lead to a long period of suspension of the insured activities.

- **Loss adjusting process:** the prohibition of access to the site might not enable the appointed adjuster to visit the site gathering the required information on the loss covered under the main Policy section and therefore the resulting delay covered under this extension. Depending on the Country where it is necessary to operate it will be important to check whether there are adjusting firms authorised to access the site in these cases.

7. Public Utilities

The aim of this extension is to cover BI resulting from delay, interruption or interference with the insured business as a consequence of a failure in the supplied public utilities. There are different types of public utilities that might be included in this extension, such as: electricity, gas, water and telecommunication.

It is easy to imagine how all activities are heavily dependant on these utilities.



Elements to be taken into consideration during risk assessment are the following:

- Type of activity insured and dependent on this the utilities on which this is most dependant (e.g. water for a paper mill, electricity for an aluminium smelter plant, etc.);
- Characteristics of the utility with regard to the generation/production and the distribution (e.g. energy through high voltage connection, gas with dedicated pipeline, net/grid topology, redundancies in the connection to the Insured, etc.);
- Reliability of supply network;
- Reliability of each of the suppliers;
- Status and Maintenance of the existing lines;
- Recent history of failure of the utilities (black out, aqueduct breakdown, etc.);
- Exposure connected to the Country (e.g. Countries operating with lack of energy production leading to frequent cases of breakdown);

- Exposure connected to natural events (e.g. overhead transmission lines exposed to damages during typhoons or hurricanes, exposure to earthquake);
- Exposure to other type of events (e.g. thefts. An aqueduct might be exposed to losses arising from thefts);
- Existence of contingency plans in case of the failure of a supplied utility (e.g. possibility to use an emergency energy generator to at least reduce the extent of the BI loss);
- In the event of a major loss (damages due to earthquake, collapse of an overhead line due to a hurricane) estimation of the time required to restart the supply;
- Type of supplied utilities that the Underwriter is prepared to cover;
- Possibility to carry out a survey before attaching cover;
- Possibility for an adjuster appointed by the Insurer to have access to the damaged supplied utilities and to follow the process of repair.

Good practice requires that the Underwriter:

a) shall decide which supplied utilities can be covered within the extension:

Mostly all utilities are stated (electricity, water, gas, communications). On the basis of the result of his/her risk assessment, the Underwriter should decide if all or just some of them can be included.

Some of these might not be easily controllable, such as communications. Nowadays when we mention communications influencing a production or site activity we need to consider fixed telephone lines, mobile telephones, internet providers. The interruption of one of these might cause different types of loss. The dependence on the transmission of data through the internet starts to have an important weight particularly if we consider applications such as the remote monitoring of the excavation parameters of Tunnel Boring Machines, the transmission of drawings and data relevant to the project design from sites to head offices and other possible applications.

We need to concentrate on the fact that the insured activity or the site might be in very remote areas where disruptions in the supply of some utilities are very likely to happen.

It is also important to agree up to what extent the elements of the distribution line can be covered. If we consider for example an energy distribution line, the cause of the disruption can occur in the power station or in the substation, high voltage transmission line, medium voltage cables, transformers, etc. Can the Insurer cover all of these elements?

The same can be said for water or gas distribution. The situation might become even more complicated for mobile phones or the internet.

b) shall state clearly the type of event that will trigger the cover;

It is important to define what type of event has to occur to trigger the cover otherwise any type of event leading to a disruption could be the cause of an indemnifiable loss.

We can think for example to a software virus hitting a program controlling a power station or an internet provider or a black out occurring because of the sudden lack

of energy in a network. These will cause disruption in the energy supplied to the Insured. Despite this none of these disruptions was caused by property damage.

To avoid this type of uncertainty it is necessary to refer to the event as to “physical damage to property” occurring to a strategic element of the supply line. It is also possible to specify what type of damage (e.g. a damage covered by the Material Damage of the CAR/EAR Policy or a damage consequent upon the occurrence of a named peril).

c) might decide to apply a sub-limit of indemnity,

Depending on the exposure arising from the inclusion of this extension the Underwriter can decide to sub-limit the indemnity.

d) shall keep open the possibility of a recovery:

In some cases the contract of supply between the Insured and the supplier(s) can include an indemnity in the event of the interruption of the service.

In this case Insurers must be sure to maintain the possibility of a recovery.

e) shall evaluate the possible accumulation with other risks

Interruptions due to catastrophic events can lead to interruption of supplies over very large areas. Risk accumulation must therefore be carefully assessed when accepting this extension.

f) shall evaluate the possibility to apply a specific time excess

Depending on the condition of the networks and their maintenance and exposure there might be the possibility of frequent interruptions. In this case the Underwriter should consider applying an each and every loss time excess specific for this extension, to cut the frequency of losses.

With regards to the general insurance principles that Insurers need to be satisfied about , we can comment as follows:

- **Duty of Disclosure:** Insurers would expect the Insured to inform them about the suppliers of the utilities to be included in this extension and on the existing contracts of supply. The Insured most likely will not be in the position to provide the Underwriter with details about the status and the maintenance of networks particularly considering the number of critical items that might be part of it (substations, power stations, etc.)
- **Possibility of carrying out a survey:** There might be the possibility to carry out a visual inspection of some elements (overhead transmission lines, external substations, etc.) but it will be difficult to carry out a survey of the critical elements of the supplying line.
- **Prompt advice in the event of a loss / actions of loss minimisation:** in the event of a loss the Insured is in the position to inform the Insurer immediately. There might be some possible mitigation measures to be taken after the loss (e.g. the use of an

emergency generator). This type of measure should be part of a contingency plan already set up by the Insured. The Underwriter should gather relevant information about this plan during the risk assessment phase.

- **Loss adjusting process:** the adjuster appointed by the Insurer is unlikely to have the right to access to the item(s) affected by the loss. This will make extremely difficult to ascertain the actual cause of the loss particularly whether this was due to a “physical property” loss.

8. Other elements of CBI

Apart from all the cases already considered there is also the possibility that ALOP/BI might depend on one (or more) specific critical element(s) located outside the premises of the insured activity or site insured. An example could be the case of a Power Station for which the energy distribution depends on a substation not owned by the Insured. In the event of a loss to this element ALOP/BI will be affected.

The analysis to be carried out will follow the same pattern already presented for other extensions. Elements to be taken into consideration during risk assessment are as follows:

- Exposure of the critical item(s) to different types of external perils (Natural Events, Fire, SRCC, Terrorism);
- Exposure of the critical item(s) to loss or damage due to internal causes (breakdown, other type of failures);
- Program of maintenance or risk prevention applied to the critical item(s);
- Loss history of the critical item(s);
- Foreseeable time required for the repair or replacement of the critical item(s) in the event of a major loss;
- Existence of a contingency plan in the event of a major loss;
- Possibility to undertake a survey before attaching cover;
- Possibility for an adjuster appointed by the Insurer to have access to the damaged critical item(s) and to follow the process of repair.

Good practice shall therefore require that the Underwriter:

a) shall decide which critical item(s) can be covered in the extension

The evaluation of which items can be insured should be based on the basic principle of insurance of the probability associated with a major loss for each. It might be difficult however to estimate which element is too exposed to be insured unless enough data are available.

b) shall state clearly in the clause what type of event will trigger cover

It is important to define what type of event is required to occur in order to trigger cover otherwise any type of event leading to a disruption can be the cause of an indemnifiable loss.

It is better to refer to a cause of loss covered under the Material Damage Section of the Policy (for CAR/EAR Policies) or to a named peril for MB Policies. In some cases it might be necessary to limit the cause of covered loss to a few named perils.

c) might decide to apply a sub-limit of indemnity,

Depending on the exposure arising from this extension, the Underwriter can decide to state a sub-limit.

d) shall retain the possibility of recovery:

There might be the possibility to recover depending on the contract between the Insured and the owner of the critical item(s). In this case Insurers must be sure to retain the possibility of recovery.

e) shall evaluate the possible accumulation with other risks

Most of the time the item(s) covered is critical only for one insured activity therefore risk accumulation with other risks is unlikely to arise.

f) shall evaluate the possibility to apply a specific time excess

Depending on the probability of a disruption to the critical item(s) the Underwriter shall consider the possibility of applying an each and every loss time excess, specifically for this extension, to cut the frequency of losses.

For the general insurance matters we comment as follows:

- **Duty of Disclosure:** the Insured is unlikely to be in the position to inform the Underwriter adequately on the risk exposure of the critical item(s).
- **Possibility of carrying out a survey:** There might be the possibility to carry out a visual inspection but a surveyor will not be allowed to access the critical item(s) unless a specific provision providing this right has been included in the Policy.
- **Prompt advice in the event of a loss / of loss minimisation:** in the event of a loss the Insured is in the position to inform the Insurer immediately of its occurrence. There might be some mitigation to be taken after the loss. These types of measures should form part of a contingency plan already set up by the Insured. The Underwriter should gather relevant information about this during risk assessment.
- **Loss adjusting process:** the adjuster appointed by the Insurer is unlikely to have the right to access the item affected by the loss. This will make it extremely difficult to ascertain the actual cause of the loss and to follow the progress of repair works in order to make sure that these will be carried out in a reasonable time.

9. Conclusions

In the previous pages it has been possible to carry out a brief review of CBI introducing some of the most common types of CBI-extension used at present in the insurance market.

For each clause comments have been made on good practice to be applied during risk assessment, exposure evaluation, clause preparation and risk monitoring.

Losses covered by CBI extensions do not fall in the natural philosophy of cover of a CAR-EAR/ALOP or MB/BI Policy. Their origin appears to be linked to extensions which originated during soft cycles of the Insurance Market.

Taking into consideration the uncertainty linked to the difficulty in obtaining information, monitoring the risk and carrying out the process of loss adjustment and settlement, “good practice “ remains to proceed with sense and prudence.

Underwriters should not be guided in their evaluation only by commercial pressure sometimes undervaluing the possible increase in risk exposure introduced in the Policy by these clauses. They should instead carry out a cautious analysis of all elements available with the aim of quoting properly for each. A clear wording needs to be agreed for extensions, with the Client or their Broker, which states without ambiguities when a loss event is covered and to what extent.

As a quick reference guide for Underwriters we enclose a brief check list.

10. Underwriting Good Practice Check-list

10.1 Suppliers Extension

Items to be assessed in the evaluation of Risk Exposure

- Suppliers to be insured and items produced in their premises;
- Criticality of items produced for insured's activity;
- Their effect on the critical path in the event of a loss;
- Their replacement time in the event of a total loss;
- Existence of mitigation measures applicable in the event of a loss ;
- What type of perils the underwriter is prepared to cover;
- Location of the premises to be insured;
- Exposure of the premises to natural events, fire and other perils insured;
- Fire prevention measures installed at the premises;
- Possibility for an adjuster appointed by the Insurer to have access to the insured premises in the event of a loss.

Items to be taken into account during Clause Preparation

- Does the Underwriter know which premises are insured and will the inclusion of further premises be subject to his/her agreement?
- Are the territorial limits clearly stated?
- Might it be necessary to apply a sub-limit?
- Has the right to recover been maintained?
- Is there any accumulation with other risks insured?
- Might it be necessary to apply a specific time excess?

10.2 Prevention of access

Items to be assessed in the evaluation of Risk Exposure

- Location of the site and its accessibility;
- Status of access roads and of other critical structures;
- Exposure of access roads and other structures to flooding, landslide, avalanches;
- General exposure of the site area to natural events such as earthquake, hurricanes, typhoons;
- Alternative access available in the event of a major loss affecting roads or structures. Additional costs for this alternative access;
- Period of time required for the reconstruction of a critical part of a road or a structure that might be affected by a major loss;
- Responsibility for the maintenance and reconstruction of the access roads or structures;
- Existence and terms of contractual agreements between the above mentioned entity and the Insured;
- History of previous cases of interruption and duration of the previous disruptions that have occurred;
- Extent of the Clause that the Underwriter is prepared to accept (i.e. territorial limit of application);
- Type of events that the Underwriter is prepared to cover;
- Possibility to carry out a survey before attaching cover;
- Possibility for an adjuster appointed by the Insurer to have access to the roads or other structures granting access to the site and to follow the process of repair.

Items to be taken into account during Clause Preparation

- Are the territorial limits clearly stated?
- Does the clause state clearly which types of loss will trigger the cover?
- Might it be necessary to apply a sub-limit?
- Has the right to recover been maintained?
- Is there any accumulation?
- Might it be necessary to apply a specific time excess?

10.3 Interruption by Civil Authority

Items to be assessed in the evaluation of Risk Exposure

- Exposure of third parties caused by the insured activity;
- Possible effect that a major loss can have on third parties;
- Attitude of the local inhabitants towards starting litigation;
- Attitude of the local media in respect of the insured activity;
- Level of local bureaucracy.

Items to be taken into account during Clause Preparation

- Does the Clause state clearly which type of loss will trigger the cover?
- Does the Clause clarify which type of action of the Civil Authority triggers the CBI cover?
- Are the territorial limits clearly stated?
- Might it be necessary to apply a sub-limit?
- Might it be necessary to apply a specific time excess?

10.4 Public Utilities

Items to be assessed in the evaluation of Risk Exposure

- Type of activity insured and public utilities on which this activity depends the most;
- Generation/production and distribution facilities used for the utilities (e.g. energy through high voltage connection, gas with dedicated pipeline, etc.) and their vulnerability. Topology of the distribution/communication grid used;
- Reliability of the supply network;
- Reliability of each of the suppliers;
- Status and Maintenance of the existing lines;
- History of failure of the supplied utilities;
- Exposure connected to the Country;
- Exposure connected to natural events;
- Exposure to other types of event;
- Existence of contingency plans in case of the failure of a utility;
- In the event of a major loss (damage due to earthquake, collapse of an overhead line due to a hurricane) estimation of the time required for restarting the supply;
- Type of supplied utilities that the Underwriter is prepared to cover;
- Possibility to carry out a survey before attaching cover;
- Possibility for an adjuster appointed by the Insurer to have access to the damaged supplied utilities and to follow the process of repair.

Items to be taken into account during Clause Preparation

- Which supplied utilities can be insured?
- Does the clause state clearly which types of loss will trigger the cover?
- Might it be necessary to apply a sublimit?
- Has the right to recover been maintained?
- Is there any accumulation?
- Might it be necessary to apply a specific time excess?

10.5 Other elements of CBI

Items to be assessed in the evaluation of Risk Exposure

- Exposure of the critical item(s) to external perils;
- Exposure of the critical item(s) to loss or damage due to internal causes;
- Program of maintenance or risk prevention applied to the critical item(s);
- Loss history of the critical item(s);
- Foreseeable time required for the repair or replacement of the critical item(s) in the event of a major loss;
- Existence of a contingency plan in the event of a major loss;
- Possibility to carry out a survey before attaching cover;
- Possibility for an adjuster appointed by the Insurer to have access to the damaged critical item(s) and to follow the process of repair.

Items to be taken into account during Clause Preparation

- What critical item(s) can be included in the Clause?
- Does the clause state clearly which types of loss will trigger the cover?
- Might it be necessary to apply a sub-limit?
- Has the right to recover been maintained?
- Is there any accumulation?
- Might it be necessary to apply a specific time excess?

11. References

11.1. Literature

1. Georges Galey, Michael Kuhn – The Vitzliputzlis of business interruption insurance – Swiss Re Technical Publishing 2007 (available in Swiss Re website)
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11.2. Illustrations

1. Swiss Re – Engineering Insurance Claims Review