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Explanation of tariff regulation in the Caribbean Netherlands

Introduction

In this document, the Netherlands Authority for Consumers and Markets (ACM) explains how ACM wishes to organize tariff regulation in the Caribbean Netherlands. This document primarily targets the electricity and drinking water companies on Bonaire, Saint Eustatius and Saba. These companies are regulated, and will have to organize tariff regulation in cooperation with ACM. ACM will eventually lay down the regulatory framework in a regulatory decision and in tariff decisions. This document can also be useful to other interested parties that wish to understand ACM's tasks, and in what way ACM will carry out its tasks.

This document is a starting point for the debate on how to organize tariff regulation. It will not cover each and every detail or all exceptions.

In part I of this document, ACM explains what choices are made (or can be made) when setting up regulation for the Caribbean Netherlands, and what considerations play a role in that process. In part II, we will flesh this out into a step-by-step plan.

Broadly speaking, the process for setting the tariffs of the electricity and drinking water companies looks like this:

- ACM discusses with the companies and with buyer organizations how tariff regulation should be organized;
- ACM asks for the relevant data and information to be submitted by the companies;
- After consultation with interested parties, ACM sets a method;
- Companies will submit tariff proposals based on this method;
- ACM sets the tariffs;
- Companies inform buyers about the tariff changes.

ACM will publish on its website as much as possible all the relevant documents and calculations: www.acm.nl/caribisch-nederland. If you have any questions or comments, please contact Laurens Jörg or Marga Buys. Their contact details are:

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Part I – Regulation: basic principles and considerations

What does the Act on Electricity and Drinking Water on BES say about regulation?

1. The general objective of this act is to have a secure, affordable and sustainable supply of electricity and drinking water. In the Explanatory Memorandum, this objective is split into three objectives for tariff regulation:

    - Consumer protection (against too high tariffs of a monopolist)
    - Investor protection (enough room for investments; reasonable return for the companies)
    - Efficiency of the companies (sufficient quality for as little cost as possible)

2. Furthermore, the Explanatory Memorandum states that 'cost orientation' should be the basic principle. This means that the tariffs for any service provided must be related to the costs of that service as much as possible. For example, the costs for producing drinking water cannot be included in the electricity tariffs or vice versa.

3. The act and the interpretation of several parts thereof in the Ministerial regulation on electricity and drinking water on BES stipulate that, for both the production price as well as for the distribution tariff, ACM should use a method that stimulates the company to operate efficiently. In such a method, ACM should describe in what way the tariffs are set each year. The method is valid for a period of 3 to 10 years.

4. It is ACM's task to set a method that takes into account the costs that a company incurred *and* that stimulates the company to operate efficiently. These two basic principles must be linked to one another. If only the company's costs were to be taken into account, it would be called a cost-plus regulatory method. If the efficiency incentive was the primary focus, you would have various options. The Explanatory Memorandum lists the following options for stimulating companies to operate efficiently:
    - Imposing a revenue cut, for example, by imposing a frontier shift, which is an expectation that companies are becoming more and more efficient.
    - Based on studies or on a benchmark with other companies in the region, determining what the costs are that comparable companies incur, and designate these as efficient costs ('benchmark').
    - Applying a system such as profit-sharing, where the revenues are set, and any higher or lower costs are settled with the revenues in a subsequent year.

ACM tries to find a balance between both of these basic principles

5. Imagine we chose to set the company's revenues equal to the company's total costs. On the one hand, we would then know for sure that the company is able to recoup its costs (and is thus less likely to run into financial trouble as a result of the chosen regulatory method). On the other hand, the company would have no incentive whatsoever to reduce costs, because all costs are covered by the tariffs anyway. Consumers may thus end up paying too much.

6. On the other hand: if we completely went for the efficiency incentive, we would be able to choose not to base the revenues on the company's own costs. For example, we would be able to base the revenues on a comparison of the costs of other companies. We would have the same effect if we set the revenues of a company for a longer period of time (multiple years). In both scenarios, the company would have a bigger incentive to reduce costs. Because the company would then have more money left (and would even be able to make more profit, temporarily). In addition, the fact that the company might have to pay higher costs (or a share thereof) is a strong incentive to think about whether or not certain costs are really necessary. The drawback of this method is that the company's revenues and costs could diverge since the link between costs and revenues is weak, thereby resulting (temporarily) in high profits or big losses.

7. One option that takes into account both criteria (cost-oriented revenues and an efficiency incentive) is the so-called 'profit-sharing' method. This method bases the company's revenues at the start of the regulatory period on the actual costs including a reasonable return. If it turned out afterwards that the company actually incurred costs that were higher (or lower), part of the difference would be borne by the company itself, while another part by consumers.

8. Let us discuss an example to illustrate this. Suppose company A has USD 1 million in costs. The revenues of this company for 2017 would then be set at USD 1 million. We will then look at what the actual costs are in 2017. There are three scenarios:

    - The company incurred USD 1 million in costs, which is equal to the revenues. We will then again set the revenues for the next year at USD 1 million.
    - The company incurred higher costs, for example USD 1.1. million. The company will thus have posted a loss of USD 100,000. The profit-sharing method means that the company will have to bear part of this loss, for example, half of it. We will then set the revenues at USD 1.1 million for the next year (the actual costs of 2017) plus USD 50,000 to compensate for half of the loss. Total revenues for the next year will thus be USD 1.15 million.
    - The company has incurred lower costs, for example, USD 0.9 million. The company will thus have made a profit of USD 100,000. The profit-sharing method means that the company may keep part of this profit to itself, for example, half of it. We will then set the revenues at USD 0.9 million (the actual costs of 2017), and subtract USD 50,000 to return half of that profit to consumers. Total revenues for the next year will thus be USD 0.85 million.

9. This method makes sure that a company will have an incentive to reduce costs, if possible. These cost reductions will lead to lower revenues, and thus to lower tariffs, as a result of which, buyers will benefit, too. However, a company would also not run into financial trouble as easily if costs did rise. In that case, the buyers will pay part of the higher costs (as long as these are not

unreasonably higher costs, of course).

What other basic principles are important to ACM when selecting a method?

10. ACM has a certain degree of freedom when selecting a method. Besides the mentioned requirements that have been laid down in the act, ACM uses the following criteria that are important when making this choice:
    - Feasibility: the method needs to be feasible in the sense that it actually can be implemented, and the burden on businesses must be as little as possible. This is particularly important in the Caribbean Netherlands because most businesses are small in terms of scale (they usually do not have a separate regulatory department, like most businesses in the European part of the Netherlands do).
    - Explainability: the method needs to be easy-to-understand for consumers and businesses.
    - Transparency: the method needs to be transparent. Consumers and businesses must be able to see how the tariffs have been set.
    - The company's own responsibility: ACM does not wish to step into the shoes of the company's executives by, for example, deciding exactly what costs can or cannot be made.

11. Of the possible methods described above (under 4), ACM prefers the method of profit-sharing. This method is relatively simple, and meets the aforementioned criteria. Furthermore, another option (the benchmark) is not possible because of a proper comparison between the costs regulated electricity and drinking water companies in the Caribbean is lacking. This may be an option for the second regulatory period. In the upcoming year, ACM will explore whether such a comparative analysis is feasible.

12. The method of profit-sharing does justice to the company's own responsibility, and it also creates an incentive to realize cost reductions. Cost reductions eventually lead to lower tariffs for consumers. With this method, the administrative burden on companies is expected to be limited, even though, especially in the beginning, efforts need to be made in order to provide all of the necessary information.

Please note: In the European part of the Netherlands, a method decision is published in which it is determined in what way the revenues of companies are to be calculated. A big difference between the method for the Caribbean Netherlands and the European part of the Netherlands is that, in the latter, the method is much more fleshed out in the statutes. For example, it has been laid down what formula must be used to determine the revenues (last year's revenues + inflation + x-factor), and based on what regulatory principle (price-cap-regulation). With regard to the Caribbean Netherlands, the interpretation of the method has been laid down in less detail, which means there is more freedom for ACM to come to an interpretation, taking into account local circumstances.

Other issues need to be laid down in the method, too:

13. In the method, ACM also needs to describe, and if so, in what way, any differences between revenues and costs can be corrected in a later year.

14. The method may differ between distribution and production, drinking water and electricity, and possibly between islands, too (even though there has to be some justification for any differences).

15. The bill describes what tariff categories must be distinguished: the connection tariff, the fixed user tariff, and the variable user tariff. Multiple tariffs are possible per tariff category, for example, based on the size of the connection.

16. In addition, there are several special situations:

- When transporting drinking water per tanker truck (for buyers that are not connected to the drinking water network), a separate 'road transport tariff' will be set;
- It is possible that consumers take out pre-paid contracts for electricity and/or drinking water (currently, this is primarily used on Bonaire for electricity (pagabon)). With pre-paid contracts, no fixed user tariff is charged. Instead, the variable user tariff is higher. Exactly how much higher this tariff is will be laid down in a ministerial regulation.
- Buyers with a small connection are able to get a discount on the fixed user tariff (this needs to be laid down in a ministerial regulation).
- ACM also needs to set a reconnection fee, if buyers wish to be reconnected (after they have been disconnected at their own request or after failure to pay their bills).
- The level of the feed-in fees will be laid down in a ministerial regulation, which is the fee that buyers receive for electricity that they generate themselves (for example with solar panels), and export back to the grid.

Part II – Setting up the regulation: a step-by-step plan

Practice: a step-by-step plan for method decisions

17. In the first part of this document, it has been explained that ACM prefers the profit-sharing method. In this second part, we explain what steps we need to take for that method, what further choices need to be made, and what information is needed.

18. In order to establish a tariff-assessment method, we need to take four steps in the method:

- Step 1: Setting the costs;
- Step 2: Determining how these costs lead to revenues;
- Step 3: Determining in what way those revenues lead to tariffs;
- Step 4: Determining in what way any differences between costs and revenues afterwards are settled.

Step 1: Setting the costs (because: tariffs must be cost-based)

19. Apart from the question of what a company's *efficient* costs are, we first need to set the company's *actual* costs. That is not as simple as it sounds. The following questions are tackled in this step:
    - Does the company have annual reports and annual accounts, and have these been audited by an accountant?
    - What is the value of the investments (assets) of the company? How do we determine their value? Do we need to divide it into different categories? In how many years can it be written down?
    - What are the operational costs of the company?
    - What is a 'reasonable return', or: what amount can the electricity or drinking water company compensate its investors (banks, shareholders)?

20. To ACM, a key basic principle is that we do not step into the shoes of the company's executives to determine what costs can and cannot be made. But that does not mean that ACM will designate all of the company's costs as reasonable costs just like that. ACM will, among other things, impose requirements on the accounting system, and on the audits thereof. And we also need to take into consideration the fact that the costs are eventually paid by the buyers. And any unreasonable costs (or unreasonably high costs) can obviously not be included in those costs. Unreasonable costs are, for example: cost items that are not needed to realize a supply of electricity or drinking water, investments the need of which is not clear or is non-existent, etcetera.

21. ACM sets the 'reasonable return' in the same way as it does in the European part of the Netherlands. The reasonable return, the WACC (weighted average cost of capital), is set based on a standard method. When doing so, ACM obviously takes into account the circumstances in which companies in the Caribbean operate (what is the risk that a company faces, in what

markets are they active, etcetera).

22. The costs subsequently need to be allocated objectively to several different parts within the company. Clear definitions and accounting rules are thus critical. This is important because the tariffs of the various activities eventually need to be based on the costs that are associated with them.

23. In order to allocate these costs, the company's costs first need to be divided into drinking water and electricity. If a company also has any other activities (for example, WEB also manages wastewater treatment), the costs thereof also need to be clearly distinguished, and, in any case, cannot end up in the costs of electricity or drinking water. With regard to a company's general cost items (such as: office expenses, management expenses, supporting staff expenses) a clear formula needs to be chosen in order to be able to allocate those costs to electricity and drinking water, for example, using the turnover of the different divisions. If the turnover for drinking water is USD 1 million, and the turnover for electricity is USD 3 million, total turnover is thus USD 4 million. In this example, general costs can thus be allocated for ¼ to drinking water, and for ¾ to electricity.

24. Next, we split the costs for production and distribution, within the costs of drinking water and electricity. Here, too, the idea is to allocate the general costs that are made for both production and distribution to production and distribution in a logical way.

25. The result of step 1, which has been described in this section, is: a cost overview of a certain year of the costs per activity, meaning the following four activities:
    - Production of drinking water
    - Distribution of drinking water
    - Production of electricity
    - Distribution of electricity

Step 2: From costs to revenues (because: an incentive to work efficiently)

26. As has been explained in the first part of this document, the company's costs are not reimbursed in full, because then the incentive would be too little for the company to realize cost savings. The profit-sharing method does create an incentive to save costs, because the company is allowed to keep part of that cost saving. Consumers subsequently benefit from the cost savings because the following year's tariffs will be set lower. In this step, we explain how we wish to set up profit sharing, and in what way the costs that were identified in step 1 will eventually lead to revenues. This step is taken for each activity, so for the production of electricity and drinking water separately, as well as for the distribution of electricity and drinking water.

27. With profit sharing, part of the difference between the company's revenues and costs is at the company's expense. What percentage that should be, can be determined on a case-by-case

basis. Another option is to set a different percentage for losses than that for profits, for example, 50% of the profit is for the company, and the other 50% will go to consumers. But in the case of a loss, for example, only 25% will be at the consumers' expense, while 75% is borne by the company. In theory, all combinations are possible.

28. With profit sharing, the revenues are based on the company's costs, as set in step 1. However, one tricky aspect is that there is always a slight delay: you will know the costs only afterwards, while you set the revenues beforehand. The costs that a company makes in 2015, for example, will only be known in 2016. And the revenues for 2017 must be set in 2016. That means that there are always at least two years between costs and revenues[1]. Naturally, a lot can change in the meantime. Think of the following:
    - Were there one-off cost items in 2015 that will return in the future? If so, they do not need to be used in the projection of the 2017 revenues.
    - Are there cost items that may vary significantly from year to year without the company having any influence over them (for example: fuel costs for electricity production or electricity prices with the water production)?
    - Lower costs as a result of a company's increased operating efficiency. In principle, every company must be able to operate more efficiently every year. This is called productivity improvement or frontier shift. Technological improvements make this possible. Global, industrywide figures thereof are available.
    - If it is already certain that a company will make huge investments over the next few years, the costs will increase over the next few years, too, so it is obvious to take this into account. In that case, the investment programs as well as the benefits, necessity, and feasibility thereof need to be scrutinized. And arrangements need to be made about what the consequences are if fewer investments are made than initially projected.

29. This second step will result in the total revenues for a certain year for each activity (production and distribution respectively of drinking water and electricity).

Step 3: From revenues to tariffs (because: at the end of the day, ACM assesses tariffs, not revenues)

30. In this step, we allocate the revenues from step 2 to the various categories that have tariffs. We will explain this for production first, followed by distribution.

31. It is relatively simple for production since there is only one tariff that the producer charges the distributor per kWh or per m3. In order to be able to convert the revenues set in step 2 into a

[1] Every regulatory period for which the revenues are based on costs will be affected by this delay. So this applies to profit sharing only.

tariff, we need the projection of the amount of electricity and drinking water that the producer is expected to produce in a certain year. This projection must be a reliable estimate, and arrangements need to be made if it turns out afterwards that production was either higher or lower than projected (see step 4). In that case, it is necessary to have already determined in advance what production costs of those higher/lower production volumes can be charged (what part covers the energy costs of production, and what part covers the fixed production costs).

32. With regard to distribution, the calculation is slightly more complicated. That is because there are multiple tariff categories for distribution: the fixed user tariff, the variable user tariff, the connection tariff, and the reconnection fee. In addition, distributors are allowed to use different tariffs for different groups of buyers within a single tariff category. However, those tariffs must have a link to the costs that the company incurs for that specific group of buyers, for example:
    - From a technical perspective, large customers have larger connections than households. Distributors can demonstrate what the installation of the different types of connections costs, and that results in a connection tariff per category.
    - It is possible that one distributor offers certain groups of buyers better customer service (hotels, or perhaps other types of businesses), or that it takes up much more of the company's time than for households. In that case, the fixed user tariff for those categories will be different than that for households. The distribution company must be able to substantiate this with data.

33. Finally, there is another reason why calculation of the distribution tariffs is slightly more complicated: a subsidy is available for the electricity and drinking water companies in Caribbean Netherlands to put the fixed user tariff on a par with that in the European part of the Netherlands.

34. In order to allocate the distributor's revenues over the different categories, it is conceivable that we take a pragmatic approach. The distributor is allowed to put forward an allocation proposal based on the way the costs are roughly allocated over these different categories. This allocation can be laid down in the method, and does not need to be recalculated every year. The following table will thus be included in the method.

Category	Variable distribution costs	Fixed distribution costs	Connection fees	Reconnection fees
Tariff group 1 (households)	… %	… %	… %	… %
Tariff group 2 (businesses)	… %	… %	… %	… %
Tariff group 3 (…)	… %	… %	… %	… %
Etcetera	… %	… %	… %	… %

35. We then allocate the distributor's revenues in step 2 over the different categories based on the percentages from the previous table. This results in the revenues per category. In order to calculate the tariffs, we need the number of connections per category. This can be a projection, as companies obviously do not know in advance exactly how many new connections will come, and how many customers are disconnected and reconnected. If you divide the revenues per category by the number of connections per category, you will get the tariffs per category.

Please note: the tariff for pagabon is set in a slightly different manner. Customers of pagabon do not pay any fixed user tariff. In order to ensure that the distributor is still able to recoup its fixed costs, a small surcharge is added to the variable tariff (the production price). This surcharge is calculated by dividing the fixed user tariff by the average consumption. The so-called "pagabon-consumption" will be laid down in the ministerial regulation.

36. This third step results in the tariff (per activity and per individual category) that the company is allowed to use in a certain year.

Step 4: Determining what to do afterwards with any differences between costs and revenues

37. The profit-sharing method stimulates businesses to realize cost savings. This takes place by examining afterwards what the difference is between the set revenues and the actual costs incurred by the company. A percentage of this difference is then settled with the revenues in a later year. There can be reasons to allow for exceptions, which was already evident from step 3. If a company, for example, says in advance that it will produce 1 million m^3 of drinking water, but it turns to have produced only 0.9 million m^3, the company must have incurred lower costs.

38. Before calculating what part of that cost saving the company is allowed to keep for itself, and what part it must return to consumers, the costs and revenues that the company has made must first be revised by filtering out the projection errors. It must be examined whether or not all cost types (for which adjustments were made in step 2 in order to get the revenues) and all volume projections are correct.

39. This step will result in a total amount of 'correction revenues.' These revenues will be incorporated in the following calendar year, and will be included in step 2 for the new calendar year (from costs to revenues).

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