

## ARITHMETIC CONSTRAINTS TO SUBSEGMENT FORMATION

Given principles already widely accepted in the WEQ formation group, it may be relatively straightforward to agree on subsegment arrangements for the various segments. This is because only a few subsegment arrangements flow from these accepted principles. Consequently, the group may wish to focus its discussion on these few arrangements.

### Principles

The principles already accepted in the WEQ formation group include:

1. No single business interest in a segment should be able to veto a proposed WEQ standard.
2. Every business interest should have the potential to join with one or more other business interests in the same segment to veto a proposed standard.

Given the “40% rule” in the NAESB Bylaws,<sup>1</sup> these two principles correspond to the following two arithmetic rules:

1. No single business interest in a segment should have 61% or more of the segment voting power.
2. Every business interest in a segment should have the ability to combine with others in that segment to collectively amass at least 61% of the segment voting power.

In addition, during the June 20-21 meeting in Columbus, a straw vote was taken to the effect that each WEQ segment should have six Executive Committee (“EC”) and six NAESB Board (“Board”) seats. Consequently, this paper assumes that each WEQ segment has six seats to divide up. The discussion below seeks to demonstrate how the two principles/arithmetic rules identified above play out for six-seat segments with three and four subsegments respectively.

### Three Subsegment Case

The simplest arrangement that satisfies the principles/arithmetic rules in the three segment case is that each subsegment has two seats. Under this arrangement, no one subsegment will have 61% or more of the segment’s voting power (which is needed to veto a proposed standard under NAESB’s 40% rule), and any two subsegments can join together to attain a 67% vote (enough to veto a proposed standard). Such a segment would look like this:

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<sup>1</sup> The NAESB Bylaws provide that no standard may be approved by a quadrant unless it is approved by (a) at least 2/3 of the quadrant’s EC representatives, *and* (b) at least 40% of the EC representatives of each segment of each of quadrant. Part (b) of this voting rule is called the “40% rule.”

### Segment I

Subsegment A – 2 seats		3	4
Subsegment B – 2 seats	but not	2 or	1
Subsegment C – 2 seats		1	1

By contrast, giving a single subsegment three or more seats (with one or both of the others having only one each) would result in the other two subsegments combined having inadequate voting power to veto (i.e., 50% or less), violating principle/arithmetic rule 2.

Another conceptual structure for a three-subsegment segment is to permit some of the seats to be chosen at large. An example of such a structure is:

### Segment II

Subsegment A – 1 seat		2
Subsegment B – 1 seat	after election of representatives	2
Subsegment C – 1 seat	equivalent to	2
At-large – 3 seats		

However, this sort of approach will only comport with the principles/arithmetic rules if it is specified that no subsegment can obtain three or more seats; but this requirement again forces a 2/2/2 split of seats among the three subsegments, because to avoid any one subsegment getting three seats, the three at-large seats must be spread out equally among the subsegments. The same thing results in the composite case:

### Segment III

Subsegment A – 1 seat		2
Subsegment B – 1 seat	after election of representatives	2
Subsegment C – 2 seats	equivalent to	2
At large – 2 seats		

Under the principles/rules, one at-large seat each must go to Subsegments A and B.

As can be seen from this discussion, any segment with three subsegments that conforms to the principles/arithmetic rules is effectively equivalent to a segment with a 2/2/2 split of seats between the subsegments.

### **Four Subsegment Case**

The four subsegment case is more flexible than the three subsegment case, as there are several arrangements that satisfy all the principles/arithmetic rules. First, assigning one seat to each subsegment and providing that the remaining two be elected at

large – with a provision that the two at-large seats cannot both go to the same subsegment  
 – will result in two subsegments with two seats and two subsegments with one seat.

Segment IV

Subsegment A – 1 seat		1 seat
Subsegment B – 1 seat	after election of representatives	1 seat
Subsegment C – 1 seat	equivalent to	2 seats
Subsegment D – 1 seat		2 seats <sup>2</sup>
At large – 2 seats		

Without a provision ensuring that the two at-large seats cannot both go to the same subsegment, it is possible for one subsegment to end up with three seats, thus giving the remaining three subsegments inadequate combined voting power (i.e., only 50%), thus violating principle/arithmetical rule 2.

Directly assigning two seats each to two subsegments and one each to the other two will also work, as will assigning two seats to one subsegment, one seat each to the other three, and electing one at large with a provision that the at large seat cannot go to the two-seat subsegment. Thus:

Segment V

- Subsegment A – 1 seat
- Subsegment B – 1 seat
- Subsegment C – 2 seats
- Subsegment D – 2 seats

Segment VI

- Subsegment A – 1 seat
- Subsegment B – 1 seat
- Subsegment C – 1 seat
- Subsegment D – 2 seats
- At large – 1 seat

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<sup>2</sup> Of course, other possible distributions after election include:

1	2	2	2	2
2	or 1	or 2	or 1	or 2
1	1	1	2	1
2	2	1	1	1

## Discussion

Note that the subsegment arrangements discussed above will only produce results in accord with the principles/arithmetic rules if each of the subsegments really represents a separate and distinct business interest. If two or more subsegments with combined seats totaling three or more can always be expected to vote together because they are in effect a single business interest, then the principles/arithmetic rules are violated because the remaining business interests cannot combine their voting power to effect a veto in that segment.

Furthermore, it should not be assumed that *only* the subsegment arrangements identified above can be used in the WEQ. Given that the purpose of the principles/arithmetic rules is to protect the interests of all business interests, it would seem logical that a given segment can depart from these rules if all the business interests therein agree to do so. The principles/arithmetic rules should only be insisted upon in segments where one or more business interests desire such protection.